

Roto E-Tec

Electronic drive and control systems
for windows and doors

Catalogue for
security, ventilation and building automation systems



Imprint

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General information on this catalogue

- All dimensions stated in mm.
- The depicted illustrations and/or technical drawings are not true to scale.

Roto

Window and Door Technology



Production plant in Leinfelden-Echterdingen, Germany – Roto Group Headquarters.

Production companies



Roto Frank Austria GmbH
Kalsdorf (AUT)



Roto Fasco Canada Inc.
Mississauga, Ontario (CAN)



Roto Frank
Building Materials Co. Ltd.
Beijing (CN)



Roto Frank AG
Leinfelden-Echterdingen (GER)



Roto Frank AG
Velbert production plant (GER)



Roto Elzett Certa Kft.
Lövö (HUN)



Elzett Sopron Kft.
Sopron (HU)
(50%)



OOO Roto Frank
Moscow (RU)



Roto Frank of America Inc.
Chester, Ct. (USA)

Sales subsidiaries / Sales partners



Entrance area at Leinfelden-Echterdingen production plant

The Roto Group – leading the way for over 75 years

Not many brands in the construction world can look back at a similar success story, and only a few are at the forefront over decades. Roto is one of the leading manufacturers of window and door technology worldwide and a major supplier of roof and solar technology.

Our history begins, as in the case of many successful companies, with a person's name: Wilhelm Frank. It was his ideas – such as the first industrially-produced Tilt&Turn hardware in 1935 – that made him a pioneer. Our company founder was a Swabian inventor “par excellence”. Under his direction and that of his immediate successors, Roto developed with its headquarters in Leinfelden-Echterdingen (Stuttgart), from being a one man operation to an international group of companies.

Over 4000 employees around the globe are occupied with recognising customers' needs early on and developing products to enhance the added value of windows and doors for the people buying them.

Our primary objective is to create inner – and ultimately lasting – values. This is best evidenced by Roto NT – the unique modular system for windows and balcony doors, with its ten-year performance warranty. 100 million hardware kits sold since its market launch in 2000 clearly demonstrate why Roto has earned the first place worldwide

A state-of-the-art networked group of nine production plants worldwide, guarantees a high level of flexibility, productivity and supply security. Our international distribution network, consisting of over 40 company-owned subsidiaries, representations and trading partners, ensures that we are always aware of our customers' requirements. Customers and Roto benefit to an equal measure from the on-going, close dialogue with planning engineers, dealers and window & door manufacturers.

Storage conditions

■ **Protecting parts against dirt and dust**

Hardware containers should be kept closed at all times; open containers or products stored in the open, should always be covered up (i.e. with a layer of cardboard).

■ **Protecting parts against mechanical damage**

Hardware containers are to be transported and handled using suitable transport or conveying means only (forklift trucks, hoisting devices / cranes and elevators, roller belts, etc.). The stacking heights for pallets and cardboard-box packaging (during transport) must not exceed the instructions printed on the packaging.

■ **Protecting parts against air humidity and extreme temperatures**

The air humidity should be - in relative, non-condensing terms -

90 %

.

The storage temperature must not drop below -20°C or rise above $+85^{\circ}\text{C}$.

■ **Protecting parts against direct contact with humidity and wetness**

The parts must not become wet. The packaging must be dry at all times. This applies for storage and transport, as well as for unloading and loading procedures. When it is raining, plastic protective sheets or similar may need to be used during outdoor transport (i.e. on-site transport). Storage must be in suitable, closed premises and not outdoors. Condensa-

tion must be prevented at all times during the transport and storage duration.

■ **In the event that containers still end up getting wet...**

Unpack the part in the wet containers immediately, dry off the parts and then inspect them for any impairments (signs of corrosion). Once dry, the parts that are still suitable for use, must always be repackaged, using new packing material.

Environmental compatibility

■ **Assessing the environmental compatibility of Roto hardware**

Our intention is to keep the energy and operating fluid consumption levels in the production process for our hardware components as low as possible, and we are also endeavouring to manufacture hardware components with a longer service life. Natural resources are preserved here, energy consumption minimised and raw materials used in an environmentally-compatible manner.

■ **Hardware induced environmental influences**

The surface condition on our treated surfaces is abrasion-proof. When used properly, the hardware components do not present any pollution hazard. The grease we use is environmentally friendly.

■ **Environmental compatibility of packaging**

We use disposable packaging material made of reinforced cardboard, steel/PVC packaging tape, polyethylene (PE) sheeting, timber frames, cable ties, elastomer cord as well as reusable packaging, such as "Schäfer" containers, crate pallets and 'EURO' pallets..

■ **Environmental capability of disposal**

Our hardware is made of materials, that – when disposed off – can be routed into an environmentally-compatible, material-sensitive recycling process as mixed scrap.

■ **Taking back packaging**

Our packaging with the INTERSEROH logo is accepted free of charge by every INTERSEROH disposal partner. The directory listing the local disposal partners can be requested on a nationwide basis in Germany from the ISDINTERSEROH GmbH centre in Cologne, using the following telephone number: +49-2203-9147-322 The Roto INTERSEROH number is 25582.

Roto environmental management system

Roto Frank AG Leinfelden provides proof of environmental awareness through certification in accordance with DIN EN ISO 14001.

Roto considers the environmental compatibility of products and environmentally sound procedures right from the beginning, during development, design, planning, production, and logistics.

The certification underlines the environmental awareness in Roto:

In terms of industrial safety, Roto pursues occupational health and safety in the workplace, accident prevention and plant safety as fundamental goals.

Roto regards environmental protection to be an integral part of all business activities and decisions, and furthermore it is shaped by: ecologically-aware behaviour, environmental compatibility of the products and procedures, as well as preservation of existing resources.

The long service life of Roto products is also a contribution to the preservation of existing resources.



Roto quality management system

Certification in accordance with the international standard DIN EN ISO 9001 documents that Roto has systematically planned, documented, and appropriately implemented the entire design, production, and sales processes. This encompasses development and design along with production and assembly, right up to marketing and customer services.

Certification represents an outward indication of the high-quality philosophy practised at Roto.

Roto's objective is to have continuous product and service improvements for the benefit of its customers.

Roto offers its customers innovative, environmentally-compatible and technically sophisticated building hardware technology.

All around the world, Roto products are available with constant, guaranteed quality, and they are supplied as and when required.

A comprehensive view held by Roto regards all business activities - including all the activities within the company - to be the key to achieving long-term corporate success.

Roto employees are supported and challenged as part of their personal development process, and they also practise the Roto quality requirements in their daily work. Their work is performance and goal-oriented.

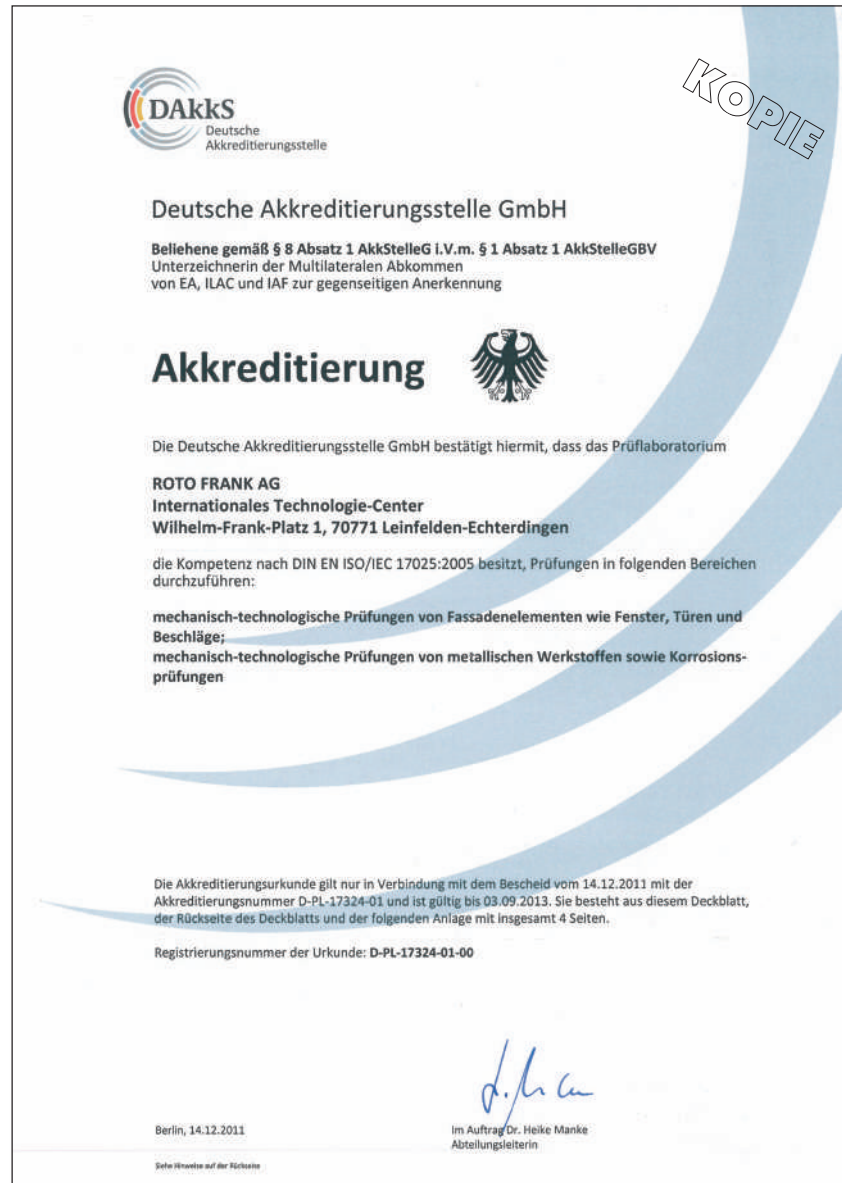


Roto Frank AG International Technology Centre (ITC)

The International Technology Centre (ITC) at the Leinfelden headquarters has been available to the Roto Group since October 1996. This facility is available to both our own material and product testing, as well as for inspecting products made by Roto market partners.

The ITC is accredited in accordance with DINENISO / IEC17025 and its level of competence encompasses the conducting of tests in mechanical-technological areas on facade elements such as windows, doors and hardware, along with metallic materials.

The attainment of the accreditation in accordance with DIN EN ISO / IEC 17025 represents the highest distinction for a test lab in the private-law sector. The preconditions for this are found in the comprehensive quality management system, trained personnel, high-quality test rigs and measuring equipment, as well as continuous external monitoring by the accreditation authorities.



Product liability guidelines

Window and balcony door hardware

Pursuant to the manufacturer's liability as defined in the "Product Liability Act" (§ 4 Product Liability Act) with regard to its products, the following information on Turn-Only, Tilt&Turn and sliding hardware for windows balcony door sashes must be observed. Failure to observe this information shall exempt the manufacturer from its liability obligation.

1. Product information and designated use

1.1 Turn-Only and Tilt&Turn hardware

Definition: Turn-Only and Tilt&Turn hardware as covered by this definition refers to single-handed operation of Turn-Only and Tilt&Turn hardware for windows and balcony doors in building construction. This is used to move windows and balcony-door sashes into a turning position or into a limited tilting position in the case of the scissors (sash-stay) version, by operating a 'hand-lever' (handle).

Use: Turn-Only and Tilt&Turn hardware is used on vertically installed windows and balcony-doors made of timber, plastic, aluminium or steel and their corresponding material combinations. Conventional Turn-Only and Tilt&Turn hardware as understood by this definition, locks window and balcony door sashes or moves them to various ventilating positions. Generally, when closing, the seal's counterforce has to be overcome.

1.2 Sliding hardware

Definition: Sliding hardware as understood by this definition, refers to hardware for sliding sashes on balcony doors and windows that are mainly used as glazed exterior structures. In combination with the sliding sashes, fixed-glazing-units and/or additional sashes, i.e. Turn-Only sashes for cleaning purposes, can be located in a window element.

Use: Sliding hardware is used on vertically installed windows and balcony-door sashes made of timber, plastic, aluminium or steel, and their corresponding material combinations. Sliding hardware as understood by this definition is equipped with a locking mechanism that fastens the sliding sash as well as rollers located on the bottom horizontal leg of the sliding sash.

Scissor stay-arms for tilting along with mechanisms for lifting and/or parallel-retracting the sashes can also be specified. The hardware locks the sashes, moves them into the ventilation position and slides them to one side.

Condensation water may form temporarily on the inside of the aluminium track depending on the outside temperature, relative air humidity of the ambient air, as well as the application location for the sliding element. The risk of this is significantly increased, when the air circulation is impeded, for example due to deep jambs, curtains and unfavourable positioning of radiator, along with similar factors.

1.3 Deviating use – Exclusion of liability

All usage that deviates from § 1.1 and/or 1.2 shall be deemed to be non-designated use, and this in turn will result in exclusion of liability.

1.4 Information on usage restrictions

Open balcony doors and window sashes, along with window and balcony door sashes that are not locked or which are in the tilted position, provide a shielding function only and they do not meet the requirements pertaining to joint sealing, water tightness under heavy rain, soundproofing, heat-insulation and burglary resistance.☐

In the event of wind and draughts, the window and balcony door sashes must be closed and locked. Wind and draughts are deemed to exist, when a window or a balcony door sash, in an opened position, is then opened or closed independently, in an uncontrolled manner, because of air pressure or air suction.

A fixed open position for the window and balcony door sashes can only be achieved using additional hardware.

1.5 Necessity for special agreements covering extended requirements

Burglar-resistant window and balcony doors, window and balcony doors for damp atmospheres, and those for use in environments with aggressive, corrosive air content, require hardware that comes with adapted and separately-agreed upon performance features for the application case involved.

The resistance against wind loads in a closed and locked state is dependent on the respective designs of the windows and balcony doors. If wind loading tests need to be carried out (for example in accordance with DIN EN 12210 - in particular, pressure test p³), suitable hardware compositions are to be coordinated and separately agreed in combination with each window or balcony door design along with the frame material.

Generally speaking, the hardware defined in § 1.1 and/or § 1.2 fulfils the requirements for barrier-free dwellings (for example, in accordance with DIN 18025). However, to this end, corresponding hardware compilations and installations in the windows and balcony doors are necessary, each of which must be coordinated and separately agreed upon.

2. Misuse

Misuse – in other words, the non-designated use of the product – for the hardware described in 1.1 and/or 1.2 for balcony doors and windows is deemed to be given, in particular,

- when obstacles are inserted into the opening range between the surround frame and the sash, thereby impeding or preventing the designated use of the product,
- if additional loads are applied to window or balcony-door sashes (for example if children swing on the window or balcony door sashes),
- if window and balcony-door sashes are pressed or banged in a non-approved or uncontrolled manner (for example by the wind) up against the window jambs, so that the hardware or the frame material or other individual window or balcony-door parts are damaged or destroyed and/or if consequential damage could arise,
- if while closing (or sliding shut) someone reaches between the sash and surround frame, and/or a person or any limbs are in this area (risk to life and limb).

(Continued on the next page)

Product liability guidelines

Window and balcony door hardware

3. Liability

Each complete set of hardware may consist of hardware parts from the Roto NT system only. The use of any compositions not approved by Roto Frank AG and/or any improper installation of the hardware and/or the use of non-genuine parts or accessory parts not approved at the factory will result in exclusion of the liability.

The "Attachment of load-bearing hardware parts for Turn-Only and Tilt&Turn hardware (TBDK)" Directive must be observed.

When using plastic or aluminium profiles, the profile manufacturer's and/or system owner's information must be observed.

The window manufacturer is always responsible for compliance with the specified system-related dimensions (for example, the gasket gap dimensions). These specified system-related dimensions are to be checked regularly, in particular, when using new hardware components for the first time, as well as during production and throughout the window installation process. The hardware parts must always be designed such that the system-related dimensions - insofar as they are affected by the hardware - can be adjusted. In the event of any deviation from these dimensions that leads to a fault that is not noted until after the window has been installed, liability shall not be accepted for the additional expenses incurred.

4. Product performances – Manufacturer information on use

4.1 Maximum sash weights

The maximum sash weights listed for the individual hardware versions may not be exceeded. The component with the least permissible load-carrying capacity determines the maximum sash weight. Application diagrams and component classification must be observed (see chapter on Schematic diagrams/Cross sections).

4.2 Sash sizes

The presentation of the application diagrams in the planning documentation, product catalogues or installation instructions depict the relationships between the permissible sash rebate widths and sash rebate heights, depending on the different glass weights or glass thickness involved. The resulting sash dimensions or sash formats (portrait and/or landscape format) – as with the maximum sash weight – may not under any circumstance be exceeded.

4.3 Hardware composition

The manufacturer's specifications concerning the hardware composition, are binding (for example: with regard to use of additional stay arms, hardware design for burglar-resistant window and balcony-door sashes etc.).

5. Product maintenance

Security-relevant hardware parts are to be examined at least once a year for firm seating along with wear and tear. The fixing screws are to be tightened and/or parts replaced and when required. The following maintenance work is also to be carried out at least once a year:

- All movable parts and all locking points of the hardware are to be greased and they are to be checked for proper function.
- Only cleaning and care agents that do not impair the corrosion protection offered by the hardware parts may be used.

Any hardware adjustments - particularly in the vicinity of the pivot rest or bogie or scissor stay - as well as the replacement of parts along with the unhinging & hinging of the active sash must be conducted by a specialist company.

When treating a surface – for example when painting or varnishing – the window and balcony-doors hardware is to be excluded from this process, and protected against any soiling caused by it (paint/varnish splashes).

5.1 Surface quality preservation

Electrolytically applied zinc coatings are not attacked when in a normal room climate, where no condensation can form on the hardware or where occasionally formed condensation can dry off rapidly.

In order to permanently preserve the hardware's surface quality and to avoid any impairment caused by corrosion, the following points must be observed:

- The hardware or the rebate areas are to be ventilated sufficiently - in particular during the building phase - so that they are not exposed to direct wetness or to condensation. Suitable measures are to be taken to ensure that (permanent) moist ambient air cannot condense in the rebate areas.
- The hardware is to be kept free from deposits and soiling from building materials (building dust, plaster, cement etc.). Any soiling through plaster, mortar or similar materials is to be removed with water before it sets.
- Aggressive vapours (e.g. by means of formic acid or acetic acid, ammonia, amine or ammonia compounds, aldehydes, phenols, chlorine, tannic acid etc.) in combination with even minor formations of condensation can lead to rapid corrosion of the hardware. For this reason, evaporation in the vicinity of the windows must be prevented.
- On windows and balcony doors made of oak or other types of timber with a high concentration of (tannic) acid, a suitable window surface treatment must be applied to ensure that the timber cannot exhale these content materials. The hardware must not come into direct contact with untreated timber surfaces.

(Continued on the next page)

- Furthermore, acetic-acid or crosslinked acidic sealing compounds or those with the above mentioned contents may not be used, since both direct contact with the sealing compound and its vaporisation can attack the hardware's surface.

Product liability guidelines

Window and balcony door hardware

- The hardware may only be cleaned using mild, pH-neutral cleaning agent in diluted form. Under no circumstances may aggressive, acidic cleaners or abrasive cleaning agents with the above-listed contents be used.
- Hardware parts may only be fastened using bare, electrogalvanised and passivated screws. On no account may stainless-steel screws be used, as this promotes the corrosion of zinc-plated surfaces.

6. Obligation to issue information and instructions

The following documentation, in particular is available to implement the obligation to issue information and instructions, which is to be forwarded to every (intermediary) dealer and processor up to the end users - as well as for conducting maintenance work:

- Planning documentation
- Product catalogue
- Installation instructions
- Maintenance and care instructions as well as operating instructions

This is known hereinafter as 'product information' – whether referring to it in whole or in part.

In order to safeguard each window and balcony door function:

- planning engineers are obliged to request and comply with the manufacturer's or authorised dealer's 'product information',
- specialised dealers are obliged to ob-

serve the manufacturer's 'product information' – this applies in particular to advertising measures – and to hand this on to subsequent dealers and/or processors, and to refer them to the fact that they are also obliged to pass this on to their customers.

- processors are obliged to observe the 'product information' and, in particular, to hand on the maintenance & care instructions as well as the operating instructions to the builders and end users.

7. Use of related hardware

The variations possible within the individual hardware systems (e.g. Tilt-Only and Top-Hung hardware, or hardware that provides a circumferential ventilation-gap by parallel-retracting the sash instead of, or in addition to the tilted position) are to be treated in keeping with the corresponding features with regard to product information, stipulated application, misuse, product performance, product maintenance, information and instruction obligations.

Security

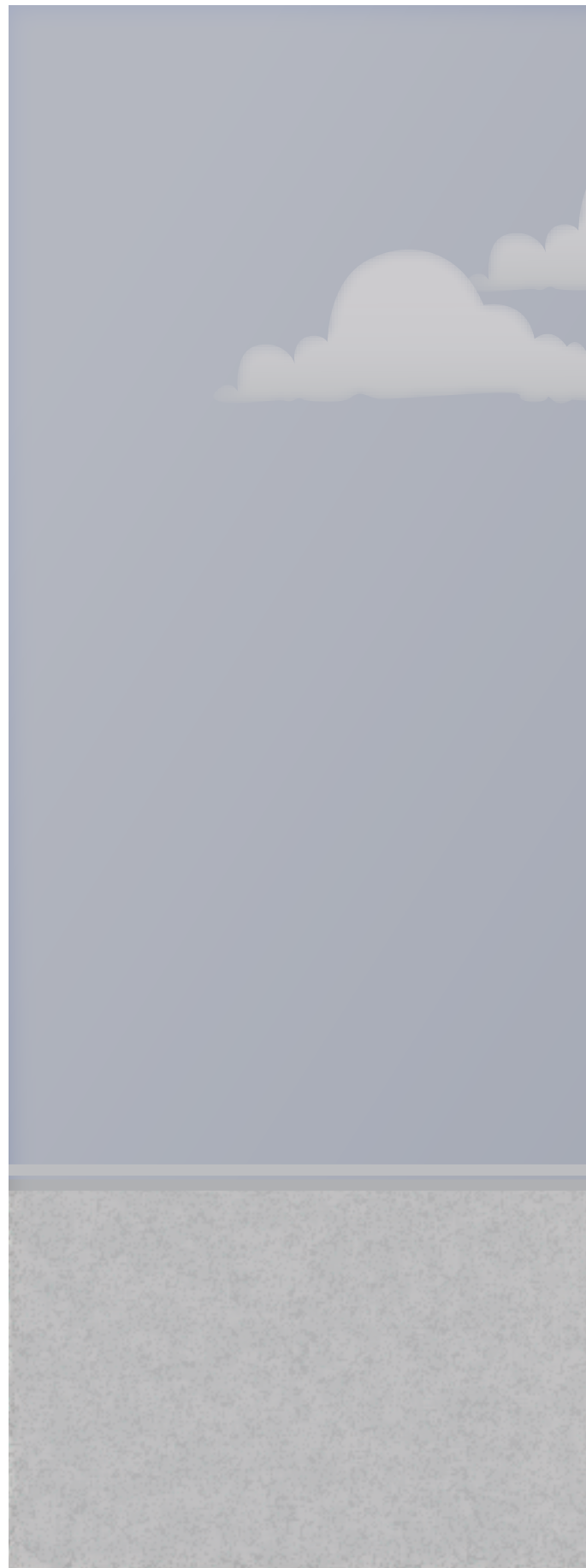
electronically regulated

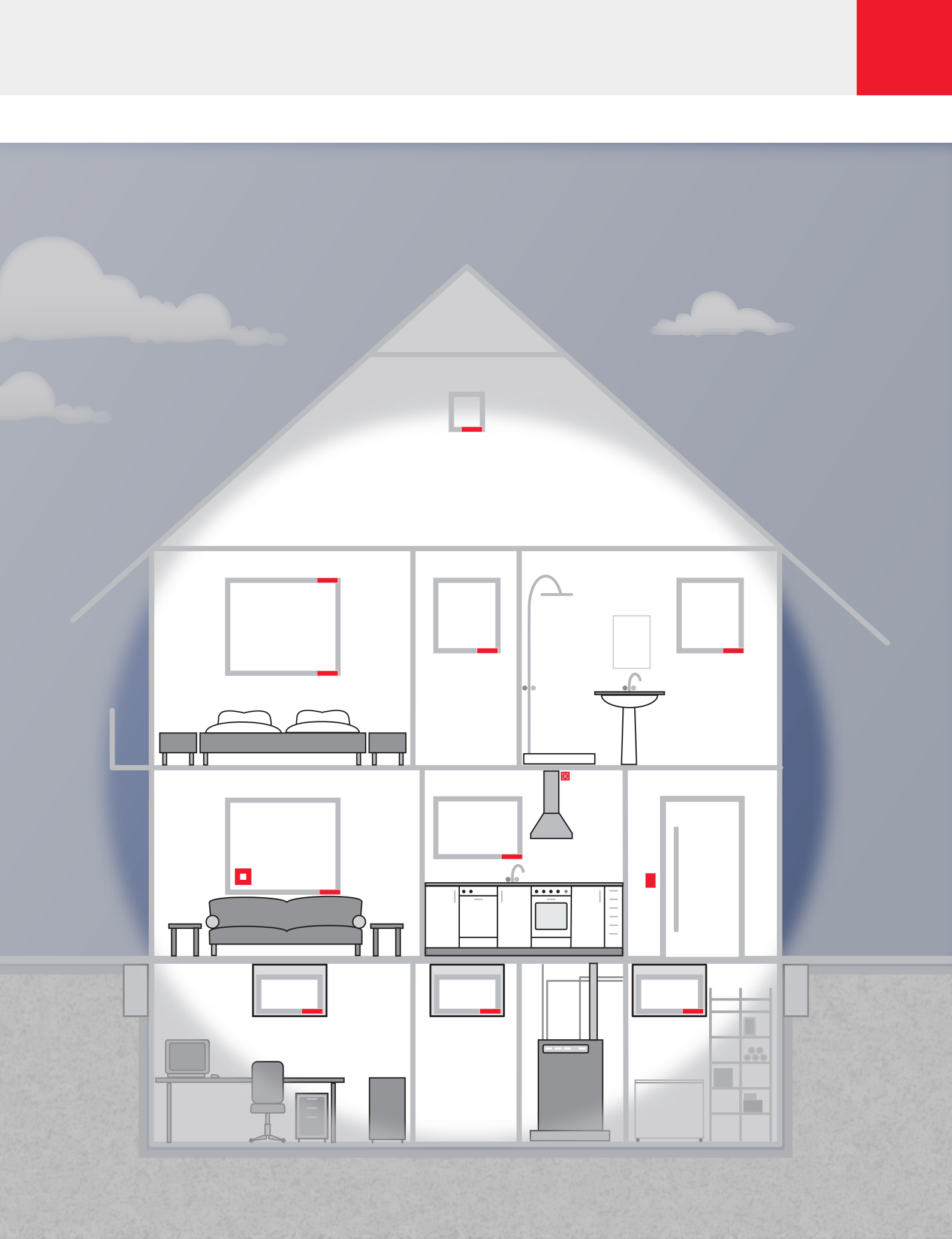
What could be more natural than having windows and doors supported directly with management and control tasks, which ensure that a home enjoys greater security, economy and a quality of living?

With its innovative products Roto creates a basis for intelligent and thereby efficient building automation systems.

Systematically integrated security

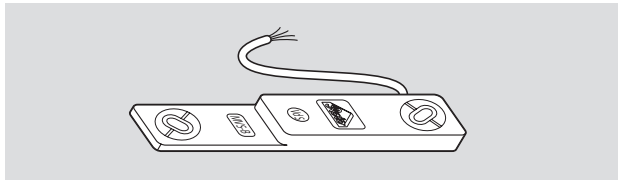
A fundamental degree of basic mechanical security is all it takes for Roto to achieve effective protection against unwanted guests, throughout various resistance classes. These are added to by cabled alarm systems, which meet each individual security requirement.





Contact elements for Roto NT

MVS contact element VdS-B



MVS contact element VdS-B

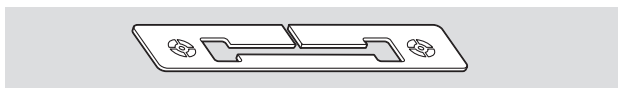
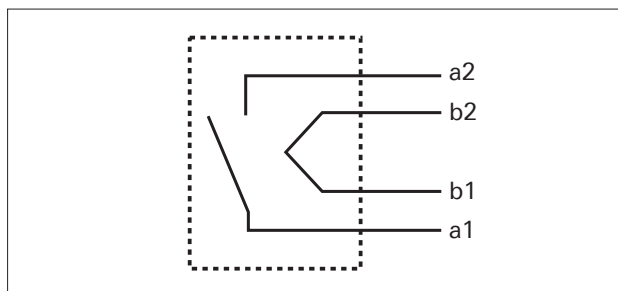
With 6 m cable, white, with installation instructions	292101
With 10 m cable, white, with installation instructions	335078
With cable in special length	Available upon request

(VdS grade valid for each cable length up to 10 m.)

Technical data

Contact type	Dry-reed contact, NO contact, potential-free contact
Voltage	$U_{\max} = 48\text{ V DC}$
Switching current	$I_{\max} = 500\text{ mA}$
Breaking capacity at pure ohmic load	$P_{\max} = 5\text{ W (=} U \times I \text{)}$
IP rating	IP 67, in accordance with DIN 40050
Environmental grade	III in accordance with VdS 2110
Housing colour	RAL 7035 (light-grey)
Cable	LIYY 4x0.14 mm ² white
Dimensions (WxDxH)	95x18x8 mm

Circuit diagram

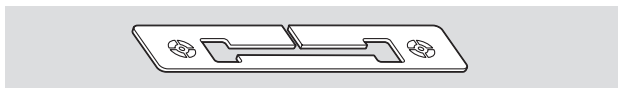


Installation base, wood

RAL 7035, 0.5 mm high, for even profiles	309245
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Installation base, plastic

RAL 7035, to be ordered separately (1 base per contact element).	→ Table P. 28
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Compensation base

RAL 7035, 0.5 mm high, as joint clearance spacer stackable on wood and plastic installation base, and MVS base V.01 + V.02.	309245
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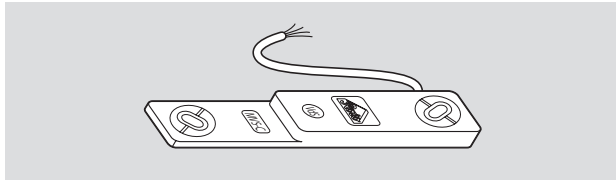


VdS recognition

Combined locking and opening monitoring	VdS no. G 102512 (VdS grade B)
Locking monitoring	VdS no. G 102038 (VdS grade C)
Opening monitoring	VdS no. G 102512 (VdS grade B)

Contact elements for Roto NT

MVS contact element VdS-C



MVS contact element VdS-C

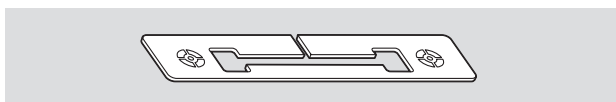
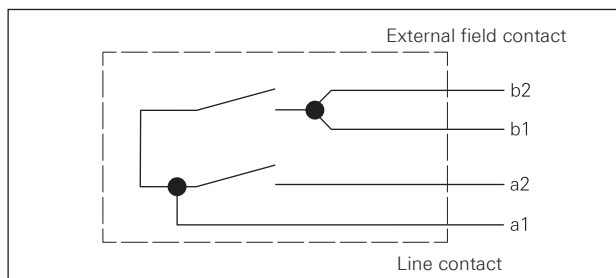
With 6 m cable, white, with installation instructions	292114
With 10 m cable, white, with installation instructions	335079
With cable in special length	Available upon request

(VdS grade valid for each cable length up to 10 m.)

Technical data

Contact type	Dry-reed contact, NO contact, potential-free contact
External field contact	Normally open contact
Voltage	$U_{max} = 30 \text{ V DC}$
Switching current	$I_{max} = 200 \text{ mA}$
Breaking capacity at pure ohmic load	$P_{max} = 3 \text{ W (=UxI)}$
IP rating	IP 67, in accordance with DIN 40050
Environmental grade	III in accordance with VdS 2110
Housing colour	RAL 7035 (light-grey)
Cable	LIYY 4x0.14 mm ² white
Dimensions (WxDxH)	95x18x8 mm

Circuit diagram

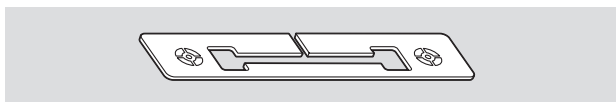


Installation base, wood

RAL 7035, 0.5 mm high, for even profiles	309245
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Installation base, plastic

RAL 7035, to be ordered separately (1 base per contact element).	→ Table P. 28
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Compensation base

RAL 7035, 0.5 mm high, as joint clearance spacer stackable on wood and plastic installation base, and MVS base V.01 + V.02.	309245
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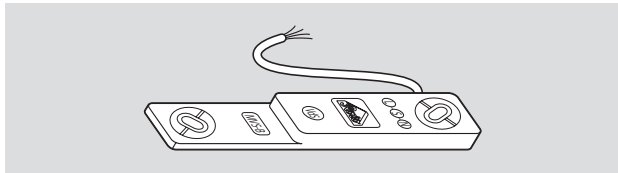


VdS recognition

Combined locking and opening monitoring	VdS no. G 102039 (VdS grade C)
Locking monitoring	VdS no. G 102039 (VdS grade C)
Opening monitoring	VdS no. G 102539 (VdS grade C)

Contact elements for Roto NT

MVS contact element VdS-B LSN



MVS contact element VdS-B LSN

Only for systems with LSN bus system

With 6 m cable, white, with installation instructions

336318

With cable in special length

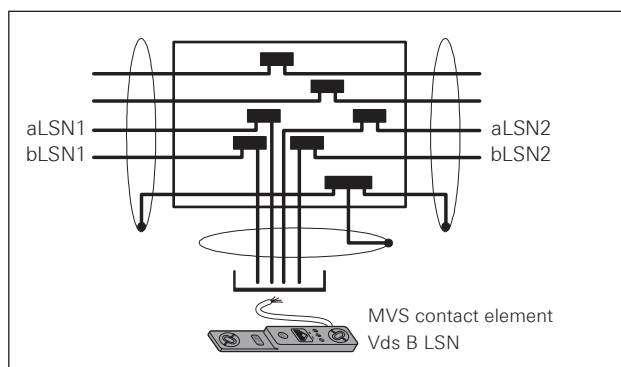
Available
upon
request

(VdS grade valid for each cable length up to 10 m.)

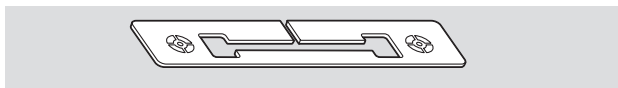
LSNi-compatible version available upon request

Technical data

LSN operating voltage	Max. 33 V DC
LSN current consumption	Approx. 0.4 mA
Cable	Ø 3.2 mm, LIY(St)Y 4x0.14 mm ²
IP rating	IP 67, in accordance with DIN 40050
Environmental grade	III in accordance with VdS 2110
Temperature range	–25 °C to +70 °C
Housing colour	RAL 7035 (light-grey)
Connection	aLSN1: white bLSN1: brown aLSN2: white bLSN2: yellow
Dimensions (WxDxH)	95 x 18 x 8 mm



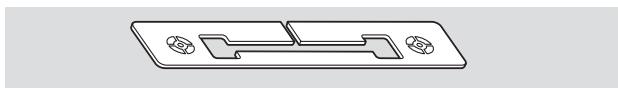
LSN network structure



Installation base, wood

RAL 7035, 0.5 mm high, for even profiles

309245



Installation base, plastic

RAL 7035, to be ordered separately
(1 base per contact element).

→ Table P. 26

Compensation base

RAL 7035, 0.5 mm high, as joint clearance spacer, stackable on wood and plastic installation base, and MVS base V.01 + V.02.

309245

VdS recognition

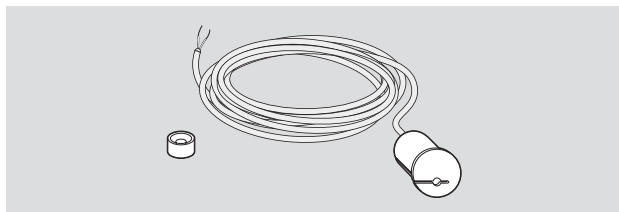
Combined locking and opening monitoring	VdS no. G 104515 (VdS grade B)
Locking monitoring	VdS no. G 104096 (VdS grade C)
Opening monitoring	VdS no. G 104515 (VdS grade B)





Contact elements for Roto NT

MVS contact element set without VdS



MVS contact element set without VdS

Silver eccentric bushing, with ring magnet and installation instructions

With 6 m cable, white, 2 wires, white, LIYY 2x0.14mm²

384016

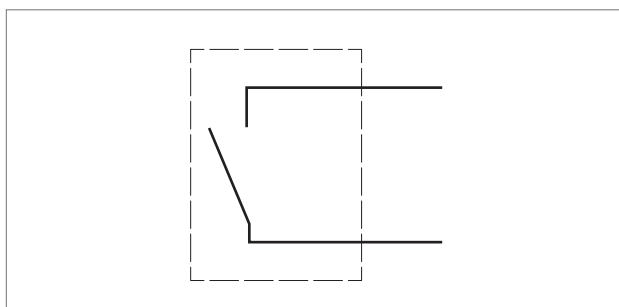
With cable in special length

Available
upon
request

Technical data

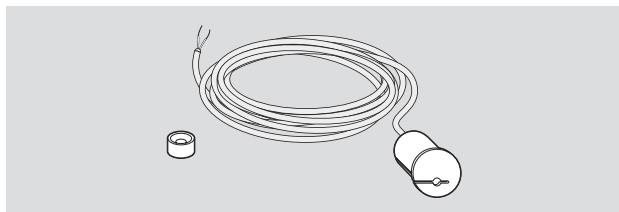
Contact type	Dry-reed contact, NO contact, potential-free contact
Voltage	$U_{max} = 48 \text{ V DC}$
Switching current	$I_{max} = 500 \text{ mA}$
Breaking capacity at pure ohmic load	$P_{max} = 5 \text{ W (=UxI)}$
IP rating	IP 67, in accordance with DIN 40050

Circuit diagram



Contact elements for Roto NT

MVS contact element set without VdS with sabotage line



MVS contact element set with sabotage line

Silver eccentric bushing, with ring magnet and installation instructions

With 10 m cable, 4 wires, white, LIYY 4x0.14 mm²

485530

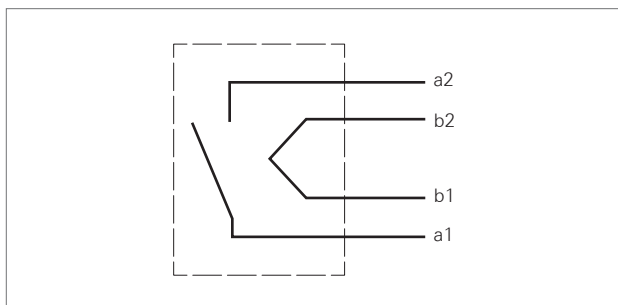
With cable in special length

Available
upon
request

Technical data

Contact type	Dry-reed contact, NO contact, potential-free contact
Voltage	$U_{\max} = 48 \text{ V DC}$
Switching current	$I_{\max} = 500 \text{ mA}$
Breaking capacity at pure ohmic load	$P_{\max} = 5 \text{ W (=UxI)}$
IP rating	IP 67, in accordance with DIN 40050

Circuit diagram



Contact elements for Roto NT

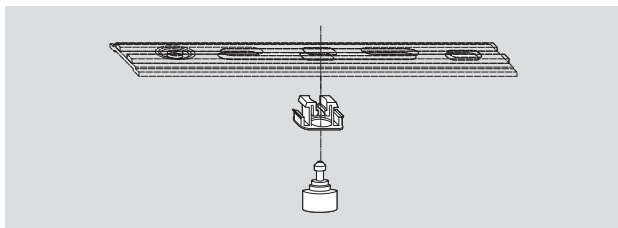
Positioning options

Element	Locking monitoring / combined locking and opening monitoring
	Contact element + MVS corner drive(—)
	Contact element + MVS espagnolette connector(—)
	Contact element + MVS espagnolette extension(—)
	Contact element + MVS installation set + Centre lock(—)
	Active sash: Contact element + MVS corner drive(—)
	D. m. sash¹⁾: Contact element + MVS rebate magnet(*)
	Active sash: Contact element + MVS espagnolette connector(—)
	D. m. sash¹⁾: Contact element + MVS rebate magnet(*)
	Active sash: Contact element + MVS espagnolette extension(—)
	D. m. sash¹⁾: Contact element + MVS rebate magnet(*)
	Active sash: Contact element + MVS centre lock(—)
	D. m. sash¹⁾: Contact element MVS installation set + MVS rebate magnet(*)
	Contact element + MVS espagnolette connector(—) + MVS centre lock(—)
	Contact element + MVS installation set
	Contact element + MVS espagnolette extension(—)
	Contact element + MVS espagnolette extension(—)
	Contact element + MVS espagnolette connector(—) + MVS centre lock(—) + MVS installation set
	Contact element + MVS espagnolette connector(—) + MVS espagnolette extension(—) + Contact element + MVS rebate magnet(*)

Element	Opening monitoring
	Contact element + MVS rebate magnet(*)
	Active sash: Contact element + MVS rebate magnet(*)
	D. m. sash¹⁾: Contact element + MVS rebate magnet(*)
	Contact element + MVS rebate magnet(*)
	Contact element + MVS rebate magnet(*)
	Contact element + MVS rebate magnet(*)
	Contact element + MVS rebate magnet(*)

1) D. m. sash = Dummy mullion sash

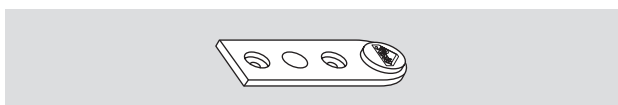
Contact elements for Roto NT Accessories



MVS installation set

MVS installation set

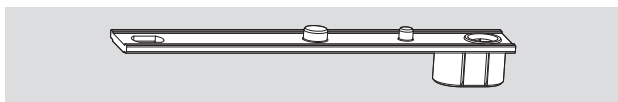
292119



MVS rebate magnet

RAL 7035 magnet (on sash) for opening monitoring. Can be used irrespective of hardware.

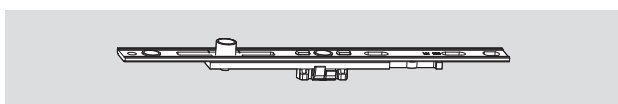
292120



Sash component rebate magnet/NT child safety lock

Sash component rebate magnet/NT child safety lock

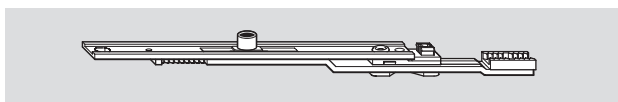
572520



MVS espagnolette connector

MVS espagnolette connector

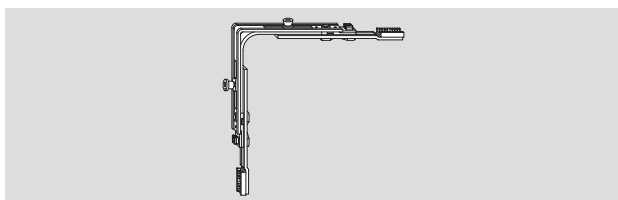
292123



MVS espagnolette extension

MVS espagnolette extension

445434



MVS corner drive

With 1 V cam and 1 magnet

292121



MVS magnetic bushing

For plugging on and bonding using Loctite 431 to hardware-coupled magnet with large clearance, for use with MVS contact element VdS-B only.

384019



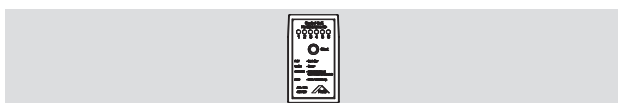
MVS drill jig

9 mm axis

378118

13 mm axis

378117



Control-unit contact elements

Control-unit contact elements

491702

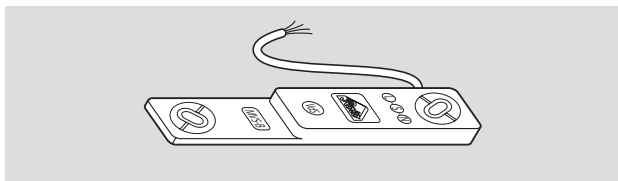
MVS / MTS profile-related frame components

Base for plastic profiles

Overview of profile-related installation bases in frame for Roto NT, plastic profiles		
Profile		Frame component
Manufacturer	Profile system	Material no.
Aluplast	Aluplast 2000	307949
	Aluplast 3000	
	Aluplast 4000	307950
	Aluplast 5000	
Brüggmann	Aluplast 6000	307949
	Brüggmann AD 13	
Gealan	Brüggmann MD 13	307951
	Gealan 3000	
	Gealan 7000	
Inoutic	Gealan 8000	308085
	Inoutic AD 13	
	Inoutic Eforte	
KBE	Inoutic MD 100	307951
	KBE 70 AD	
	KBE AD	308084
Kömmerling	KBE MD	308089
	Kömmerling 88 Plus	308083
Plus Plan	Kömmerling Eurodur 3S	
	Plus Plan Plus Tec	322822
Rehau	Rehau 799	308082
	Brillant Design	
	Rehau S730	
	Rehau S788 MD	
	Rehau 735	
	Rehau 980 Geneo	
Roplasto	Roplasto 4K	307950
	Roplasto 7001 AD	
	Roplasto 7001 MD	
Salamander	Salamander 2D	308091
	Salamander 3D	
	Salamander BluEvolution	
	Salamander Streamline 76	
Schüco	Schüco Corona AD	307950
	Schüco Corona CT70 AD	307949
Tropical	Tropical 88 Plus	308089
	Tropical 900	
	Tropical Innonova 2000	308090
	Tropical Innonova 70.A5 AD	367228
	Tropical Innonova 70.M5 MD	
Veka	Veka Alphaline 90	308086
	Veka Softline AD 9	311468
	Veka Topline AD 13	308086
	Veka Topline MD 13	

Contact elements for Roto AluVision T300, T540, Designo

MVS contact elements



MVS contact element VdS-B

With 6 m cable, white, with installation instructions	292101
With 10 m cable, white, with installation instructions	335078

MVS contact element VdS-B LSN

Only for systems with LSN bus system (see page 20)	
With 6 m cable, white, with installation instructions	336318

MVS contact element VdS-C

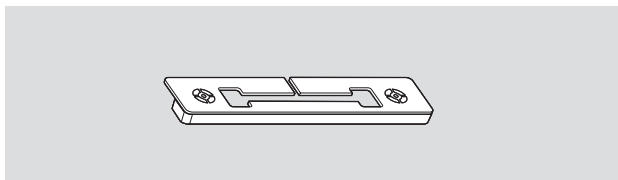
With 6 m cable, white, with installation instructions	292114
With 10 m cable, white, with installation instructions	335079

MVS contact element VdS-B, VdS-B LSN, VdS-C

With cable in special length	Available upon request
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(VdS grade valid for each cable length up to 10 m.)

Details on contact elements, see page 18 ff.


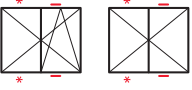
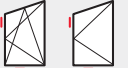
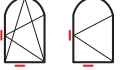
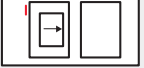

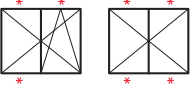





MVS base V.01 + V.02

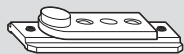
RAL 7035, 9.7 up to 14 mm	311441
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Contact elements for Roto AluVision T300, T540, Designo

Positioning options

Locking monitoring / combined locking and opening monitoring		T540	Designo	S4150 S
	Contact element + hardware coupled magnet (—)	X	X	
 Active sash: Dummy mullion sash:	Contact element + hardware coupled magnet (—) Contact element + rebate magnet (*)	X	X	
	Contact element + hardware coupled magnet (—)	X		
	Contact element + hardware coupled magnet (—)	X		
 AluVision S4150	Contact element + hardware coupled magnet (—)			X
Opening monitoring		T540	Designo	S4150 S
	Contact element + rebate magnet (*)	X	X	
 Active sash: Dummy mullion sash:	Contact element + MVS rebate magnet (*) Contact element+ + MVS rebate magnet (*)	X	X	
	Contact element + rebate magnet (*)	X		
	Contact element + rebate magnet (*)	X		
 AluVision S4150	Contact element + rebate magnet (*)			X

Contact elements for AluVision T300, T540, Designo Accessories



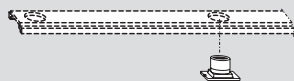
MVS rebate magnet AluVision

Usable in aluminium window systems with connecting rod groove 15/20 mm and 11.5 up to 12 mm clearance.
Usable with all hardware. **311431**



MVS adhesive magnet AluVision

Usable in aluminium window systems with connecting rod groove 15/20 mm and 11.5 up to 12 mm clearance.
Usable with all hardware. **311430**



MVS plug-in magnet AluVision

MVS plug-in magnet AluVision **337767**



MVS magnetic bushing

For plugging on and bonding using Loctite 431 to hardware-coupled magnet with large clearance, for use with MVS contact element VdS-B only. **384019**



Drilling jig for MVS adhesive magnet AluVision

MVS drilling jig for adhesive magnet **318573**



Control-unit contact elements

Control-unit contact elements **491702**

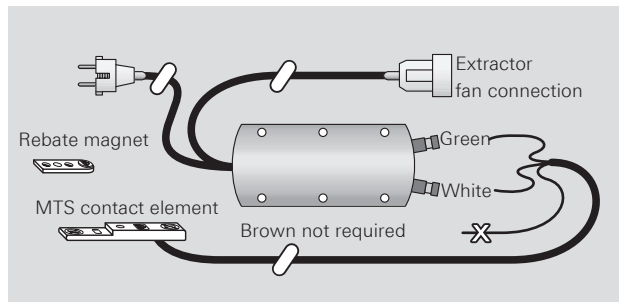


Compensation base

RAL 7035, 0.5 mm high, as joint clearance spacer stackable on wood and plastic installation base, and MVS base V.01 + V.02. **309245**

Contact elements for DAS extractor fan control system

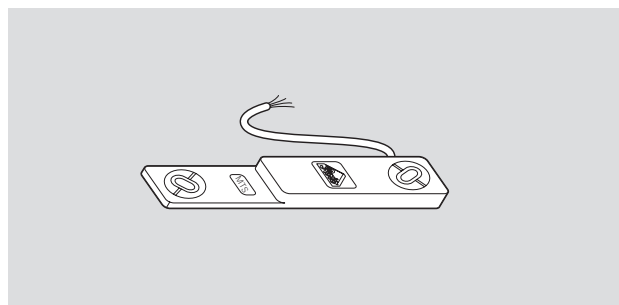
DAS extractor fan control system



DAS extractor fan control system

Connection to 230V AC only
Connected load maximum 450 VA
incl. approx. 0.2m connecting cable with
shockproof plug or shockproof connector
Fireplace regulations permit
rebate magnet only.

259251



MTS-contact element

With 6 m cable, white, with installation instructions
With 10 m cable, white, with installation instructions
With cable in special length

292118

335077

Available
upon
request

Details on contact elements, see page 18 ff.

Contact elements for DAS extractor fan control system

Accessories

For timber



Installation base, wood

RAL 7035, 0.5 mm high, for even profiles

309245



MVS rebate magnet

RAL 7035, installation on sash, for opening monitoring, hardware independent.

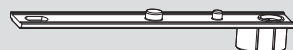
292120



Compensation base

RAL 7035, 0.5 mm high, as joint clearance spacer stackable on wood and plastic installation base, and MVS base V.01 + V.02.

309245



Sash component rebate magnet/NT child safety lock

Sash component rebate magnet/NT child safety lock

572520

For plastic



Installation base, plastic

RAL 7035, to be ordered separately (1 base per contact element).

→ Table P. 28



MVS rebate magnet

RAL 7035, installation on sash, for opening monitoring, hardware independent.

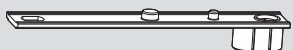
292120



Compensation base

RAL 7035, 0.5 mm high, as joint clearance spacer, stackable on wood and plastic installation base, and MVS base V.01 + V.02.

292120

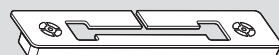


Sash component rebate magnet/NT child safety lock

Sash component rebate magnet/NT child safety lock

572520

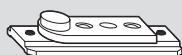
For aluminium



MVS base V.01 + V.02

RAL 7035, 9.7 up to 14 mm

311441



MVS rebate magnet complete

(also for MVS contact element)

311431



Compensation base

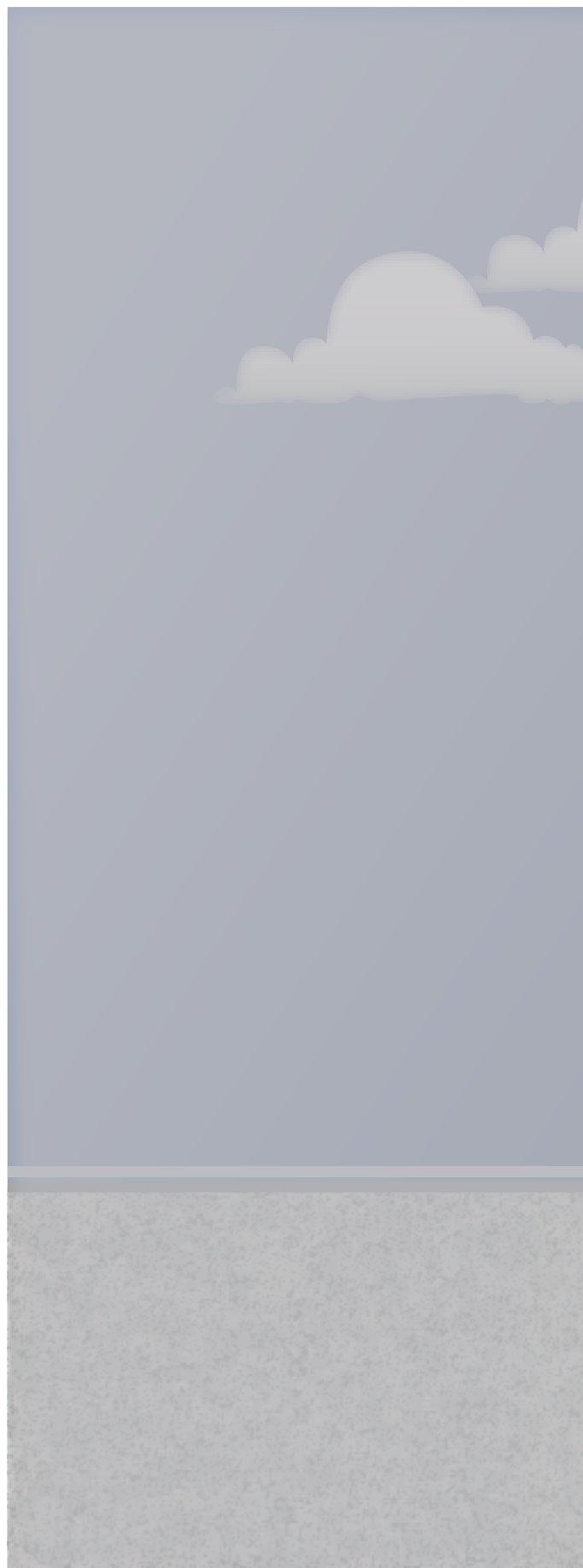
RAL 7035, 0.5 mm high, as joint clearance spacer, stackable on wood and plastic installation base, and MVS base V.01 + V.02.

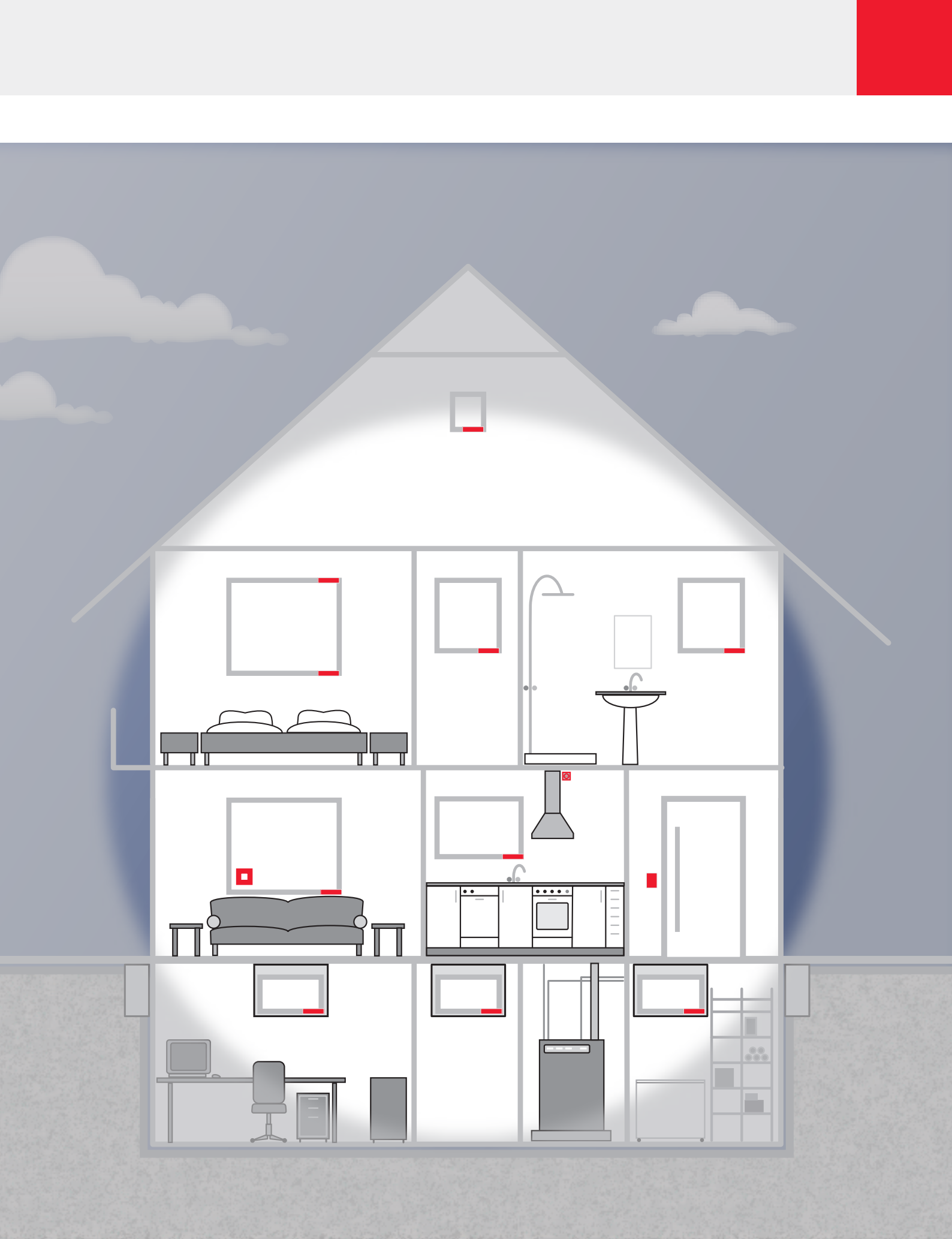
309245

Energy and comfort electronically controlled

Using energy intelligently

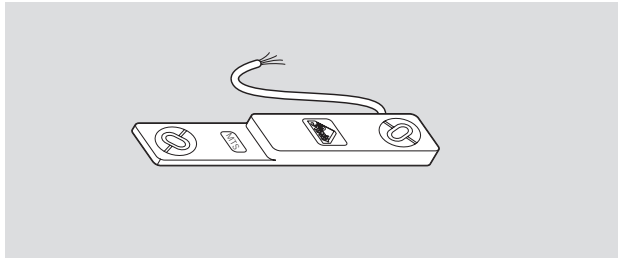
This is, for example the case when the hardware actuates the heating and climate control as and when required, while also economising during automatic ventilation. The controlled, natural tilt ventilation function is energy-saving and convenient. By also using night cooling, the climate control time can be reduced, which in turn cuts costs and protects the environment. Roto shows you how.





Contact elements for Roto NT

MTS contact element



MTS contact element

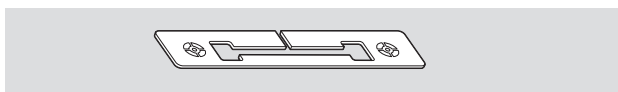
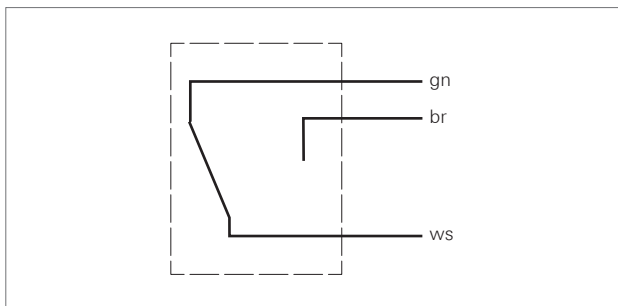
With 6m cable, white, with installation instructions	292118
With 10m cable, white, with installation instructions	335077
With cable in special length	Available upon request

Technical data

Contact type	Dry-reed contact, change-over contact, potential-free contact
Voltage	$U_{\max} = 30\text{ V DC}$
Switching current	$I_{\max} = 200\text{ mA}$
Breaking capacity at pure ohmic load	$P_{\max} = 3\text{ W (=UxI)}$
IP rating	IP 67, in accordance with DIN 40050
Housing colour	RAL 7035 (light-grey)
Cable	6m, LIYY 4x0.14mm ² white
Idle	White-green connection
Activated (by magnetic field)	White-brown connection
Dimensions (WxDxH)	95x18x8 mm

If only the closing function is required, the MVS contact element VdS-B can be used.

Circuit diagram

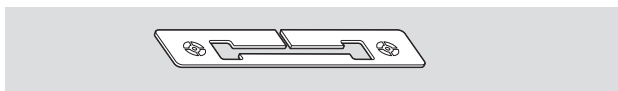


Installation base, wood

RAL 7035, 0.5mm high, for even profiles	309245
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Installation base, plastic

RAL 7035, to be ordered separately (1 base per contact element).	→ Table P. 28
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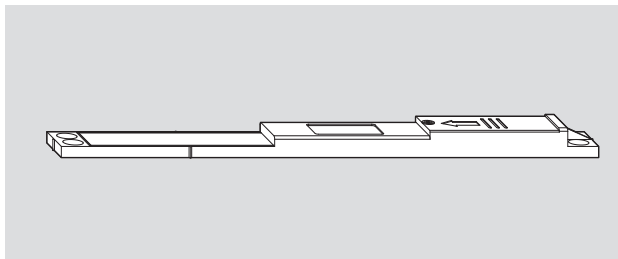


Compensation base

RAL 7035, 0.5mm high, as joint clearance spacer stackable on wood and plastic installation base, and MVS base V.01 + V.02.	309245
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Contact elements for Roto NT

Window contact for MVS radio



Window contact for MVS radio

With batteries, fixing screws and spacer sleeve set, insert → **293944**
P. 37

Function/Application

Lock monitoring: → P. 36
with hardware coupled magnet + MTS-F-E1

Opening monitoring: → P. 36
with rebate magnet + MTS-F-E2

Technical data

Radio frequency	433.42 MHz
Power supply	3 V battery
Current consumption in idle state	≤5 mA
Current consumption in alarm state	≤30 mA
Operating temperature	–20°C to +55°C
Protection against moisture	Encapsulated plastic housing
Battery	2 each 1.5 V type AAAA (LR 61)
Battery lifespan	Batteries should be changed after approx. 2 years
Width x Depth x Height	202 mm x 19.5 mm x 10.5 mm
Weight	Approx. 150 g
Colour	RAL 7036 (platinum grey)
Material	Polyamide MS 40

Test mark

CE, radio-specific approval

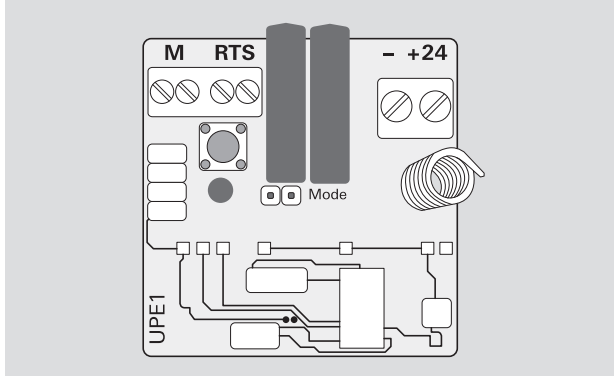


NOTE!

The maximum possible range of the radio system is dependent on the local building fabric and the window condition.

Contact elements for Roto NT

MTS radio receiver for MVS radio window contact



MTS radio receiver for MVS radio window contact

MTS-F-E1 (for hardware coupled magnets)	563194
MTS-F-E1 (for rebate magnet)	613114

Installation options

- in flush-mounting box
- on dropped false ceiling

Technical data

Contact type	Normally open or normally closed contact can be selected with jumper, potential-free contact
Power supply	24 V DC \pm 10 %
Current consumption	Max. 45 mA
Max. programmable number of MVS radio window contacts	16 off
Width x Depth x Height	41 x 41 x 20 mm
Permissible ambient temperature	-5°C to +50°C
Unsuitable for alarm systems and extractor fans	

Test mark

CE, radio-specific approval

Contact elements for Roto NT

Positioning options

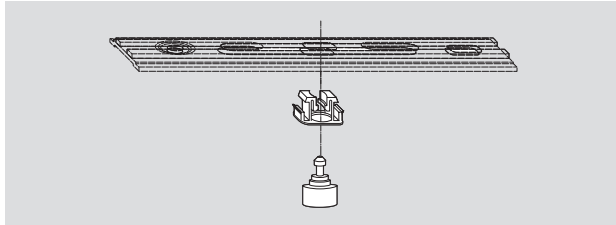
MTS contact element and MVS radio window contact

Element	Locking monitoring / combined locking and opening monitoring
	Contact element + MVS corner drive(—)
	Contact element + MVS espagnolette connector(—)
	Contact element + MVS espagnolette extension(—)
	Contact element + MVS installation set + Centre lock(—)
	Active sash: Contact element + MVS corner drive(—) D. m. sash¹⁾: Contact element + MVS rebate magnet(*)
	Active sash: Contact element + MVS espagnolette connector(—) D. m. sash¹⁾: Contact element + MVS rebate magnet(*)
	Active sash: Contact element + MVS espagnolette extension(—) D. m. sash¹⁾: Contact element + MVS rebate magnet(*)
	Active sash: Contact element + MVS centre lock(—) D. m. sash¹⁾: Contact element MVS installation set + MVS rebate magnet(*)
	Contact element + MVS espagnolette connector(—) MVS centre lock(—) + MVS installation set
	Contact element + MVS espagnolette extension(—)
	Contact element + MVS espagnolette connector(—) MVS centre lock(—) + MVS installation set
	Contact element + MVS espagnolette connector(—) MVS espagnolette extension(—) + Contact element + MVS rebate magnet(*)

Element	Opening monitoring
	Contact element + MVS rebate magnet(*)
	Active sash: Contact element + MVS rebate magnet(*) D. m. sash¹⁾: Contact element + MVS rebate magnet(*)
	Contact element + MVS rebate magnet(*)
	Contact element + MVS rebate magnet(*)
	Contact element + MVS rebate magnet(*)
	Contact element + MVS rebate magnet(*)
	Contact element + MVS rebate magnet(*)
	Contact element + MVS rebate magnet(*)

1) D. m. sash = Dummy mullion sash

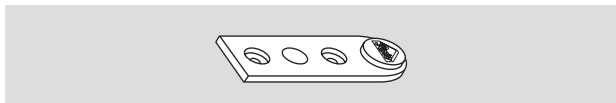
Contact elements for Roto NT Accessories



MVS installation set

MVS installation set

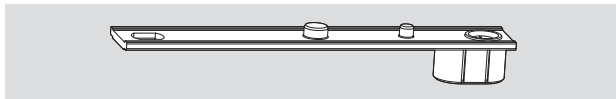
292119



MVS rebate magnet

RAL 7035 magnet (on sash) for opening monitoring. Can be used irrespective of hardware.

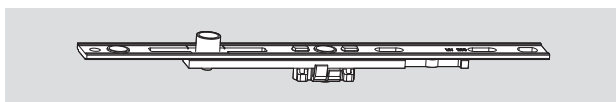
292120



Sash component rebate magnet/NT child safety lock

Sash component rebate magnet/NT child safety lock

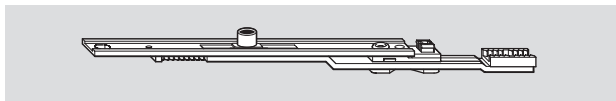
572520



MVS espagnolette connector

MVS espagnolette connector

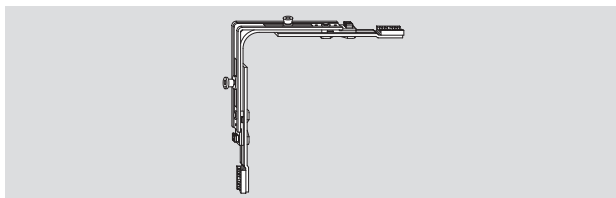
292123



MVS espagnolette extension

MVS espagnolette extension

445434



MVS corner drive

With 1 V cam and 1 magnet

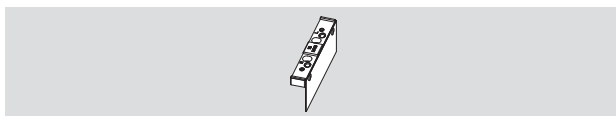
292121



MVS magnetic bushing

For plugging on and bonding using Loctite 431 to hardware-coupled magnet with large clearance, for use with MVS contact element VdS-B only.

384019



MVS drill jig

9 mm axis

378118

13 mm axis

378117



Control-unit contact elements

Control-unit contact elements

491702

MVS radio control unit (not shown)

For radio control of MVS radio window contact.

566977

MVS / MTS profile-related frame components

Base for plastic profiles

Overview of profile-related installation bases in frame for Roto NT, plastic profiles		
Profile		Frame component
Manufacturer	Profile system	Material no.
Aluplast	Aluplast 2000	307949
	Aluplast 3000	
	Aluplast 4000	307950
	Aluplast 5000	
	Aluplast 6000	
Brüggmann	Brüggmann AD 13	307949
	Brüggmann MD 13	
Gealan	Gealan 3000	307951
	Gealan 7000	
	Gealan 8000	
Inoutic	Inoutic AD 13	308085
	Inoutic Eforte	
	Inoutic MD 100	
KBE	KBE 70 AD	307951
	KBE AD	308084
	KBE MD	308089
Kömmerling	Kömmerling 88 Plus	308083
	Kömmerling Eurodur 3S	
Plus Plan	Plus Plan Plus Tec	322822
Rehau	Rehau 799	308082
	Brillant Design	
	Rehau S730	
	Rehau S788 MD	
	Rehau 735	
	Rehau 980 Geneo	
Roplasto	Roplasto 4K	307950
	Roplasto 7001 AD	
	Roplasto 7001 MD	
Salamander	Salamander 2D	308091
	Salamander 3D	
	Salamander BluEvolution	
	Salamander Streamline 76	
Schüco	Schüco Corona AD	307950
	Schüco Corona CT70 AD	307949
Tropical	Tropical 88 Plus	308089
	Tropical 900	
	Tropical Innonova 2000	308090
	Tropical Innonova 70.A5 AD	367228
	Tropical Innonova 70.M5 MD	
Veka	Veka Alphaline 90	308086
	Veka Softline AD 9	311468
	Veka Topline AD 13	308086
	Veka Topline MD 13	

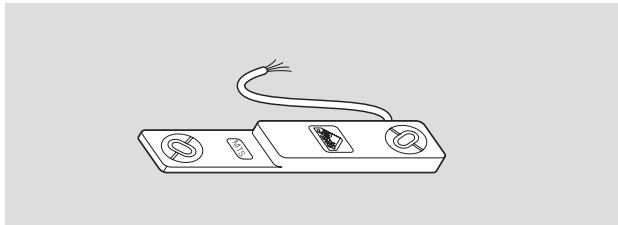
Contact elements for Roto NT, plastic

Profile overview for MSV radio window contact

Possible use of MVS radio window contact						
Profile		Spacer sleeve				
Manufacturer	Profile system	Without	2 mm	3 mm	4 mm	5 mm
Aluplast	Aluplast 2000/3000			X		
	Aluplast 4000/5000					X
	Aluplast 6000					X
Brüggmann	Brüggmann MD 13			X		
Deceuninck	Deceuninck Zendow			X		
Gealan	Gealan 3000				X	
	Gealan 6000	X				
KBE	KBE 70 AD	X				
	KBE AD	X				
	KBE MD		X			
Kömmerling	Kömmerling Eurodur 3S				X	
	Kömmerling Eurofutur Classic/Elegance				X	
Plus Plan	Plus Plan Plus Tec			X		
Rehau	Rehau S799			X		
	Brillant Design					
	Rehau 730					
	Rehau S788 MD			X		
	Rehau 735					
Roplasto	Roplasto 4K				X	
Salamander	Salamander 2D	X				
	Salamander 3D	X				
Schüco	Schüco Corona CT70 AD/MD			X		
	Schüco Corona AD					X
Tropical	Tropical Innova 70 A5/M5			X		
	Tropical Innova 2000		X			
Veka	Veka Softline AD/MD			X		
	Veka Topline AD/MD	X		X		
Weru	Weru Classico					
	Weru Fit 70			X		

Contact elements for Roto AluVision T300, T540, Designo

MTS contact element



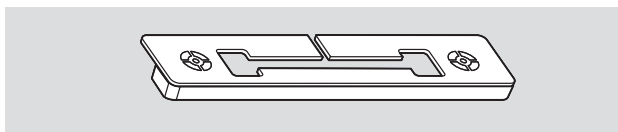
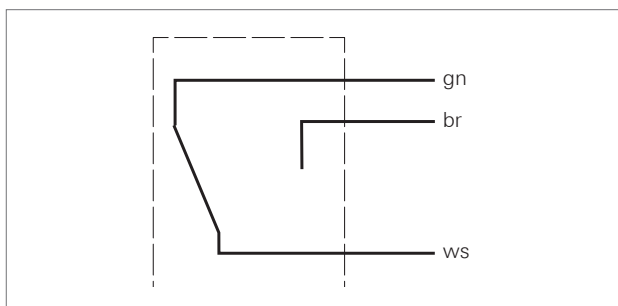
MTS contact element

With 6 m cable, white, with installation instructions	292118
With 10 m cable, white, with installation instructions	335077
With cable in special length	Available upon request

Technical data

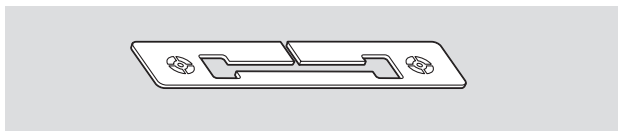
Contact type	Dry-reed contact, change-over contact, potential-free contact
Voltage	$U_{\max} = 30\text{ V DC}$
Switching current	$I_{\max} = 200\text{ mA}$
Breaking capacity at pure ohmic load	$P_{\max} = 3\text{ W (=UxI)}$
IP rating	IP 67, in accordance with DIN 40050
Housing colour	RAL 7035 (light-grey)
Cable	6 m, LIYY 4x0.14 mm ² white
MTS contact elements at idle	White-green connection
Activated (by magnetic field)	White-brown connection
Dimensions (WxDxH)	95x18x8 mm
If only the closing function is required, the MVS contact element VdS-B can be used.	

Circuit diagram



MVS base V.01 + V.02

RAL 7035, 9.7 up to 14 mm	311441
---------------------------	---------------

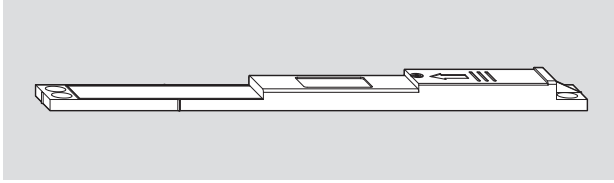


Compensation base

RAL 7035, 0.5 mm high, as joint clearance spacer, stackable on wood and plastic installation base, and MVS base V.01 + V.02.	309245
--	---------------

Contact elements for Roto AluVision T300, T540, Designo

Window contact for MVS radio



Window contact for MVS radio

With batteries, fixing screws and spacer sleeve set, insert → **293944**
P. 44

Function/Application

Lock monitoring: → P. 43
with hardware coupled magnet + MTS-F-E1
Opening monitoring: with rebate magnet + MTS-F-E2 → P. 43

Technical data

Radio frequency	433.42 MHz
Power supply	3 V battery
Current consumption in idle state	<5 mA
Current consumption in alarm state	<30 mA
Operating temperature	–20 °C to +55 °C
Protection against moisture	Encapsulated plastic housing
Battery	2 each 1.5 V type AAAA (LR 61)
Battery lifespan	Batteries should be changed after approx. 2 years
Width x Depth x Height	202 x 19.5 x 10.5 mm
Weight	Approx. 150 g
Colour	RAL 7036 (platinum grey)
Material	Polyamide MS 40

Test mark

CE, radio-specific approval

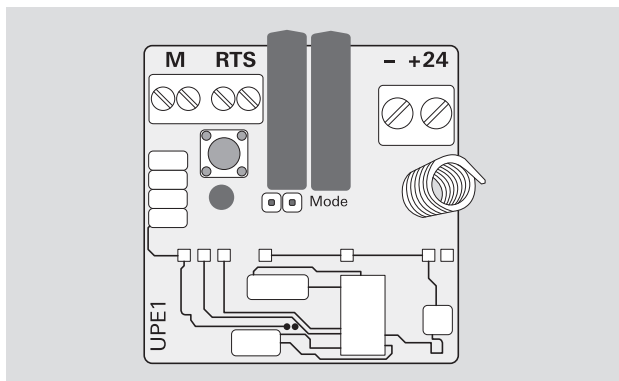


NOTE!

The maximum possible range of the radio system is dependent on the local building fabric and the window condition.

Contact elements for Roto AluVision T300, T540, Designo

MTS radio receiver for MVS radio window contact



MTS radio receiver for MVS radio window contact

MTS-F-E1 (for hardware coupled magnets)	563194
MTS-F-E1 (for rebate magnet)	613114

Installation options

- in flush-mounting box
- on dropped false ceiling

Technical data


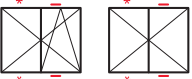
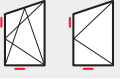


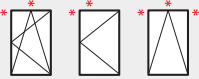
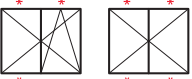

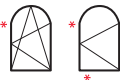
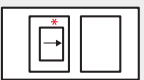
Contact type	Normally open or normally closed contact, can be selected with jumper, potential-free contact
Power supply	24 V DC \pm 10 %
Current consumption	Max. 45 mA
Max. programmable number of MVS radio window contacts	16 off
Width x Depth x Height	41 x 41 x 20 mm
Permissible ambient temperature	-5°C to +50°C
Unsuitable for alarm systems and extractor fans	

Test mark

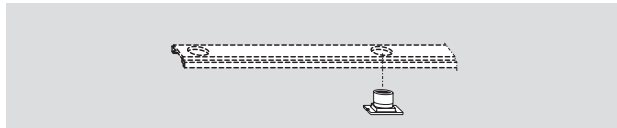
CE, radio-specific approval

Contact elements for Roto AluVision T300, T540, Designo

Positioning options

Locking monitoring / combined locking and opening monitoring		T540	Designo	S4150 S
	Contact element + hardware coupled magnet (—)	X	X	
 Active sash: Dummy mullion sash:	Contact element + hardware coupled magnet (—)	X	X	
	Contact element + hardware coupled magnet (—)	X		
	Contact element + hardware coupled magnet (—)	X		
 AluVision S4150	Contact element + hardware coupled magnet (—)			X
Opening monitoring		T540	Designo	S4150 S
	Contact element + rebate magnet (*)	X	X	
 Active sash: Dummy mullion sash:	Contact element + MVS rebate magnet (*)	X	X	
	Contact element + rebate magnet (*)	X		
	Contact element + rebate magnet (*)	X		
 AluVision S4150	Contact element + rebate magnet (*)			X

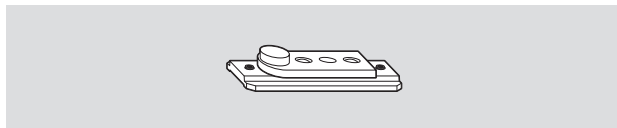
Contact elements for Roto AluVision T300, T540, Designo Accessories



MVS aluminium plug-in magnet

MVS aluminium plug-in magnet

337767



MVS aluminium rebate magnet

Usable in aluminium window systems with connecting rod groove 15/20 mm and 11.5 up to 12 mm clearance.
Usable with all hardware.

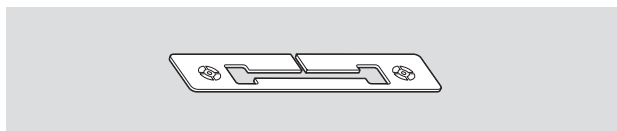
311431



MVS aluminium adhesive magnet

Usable in aluminium window systems with connecting rod groove 15/20 mm and 11.5 up to 12 mm clearance.
Usable with all hardware.

311430



Compensation base

RAL 7035, 0.5 mm high, as joint clearance spacer stackable on wood and plastic installation base, and MVS base V.01 + V.02.

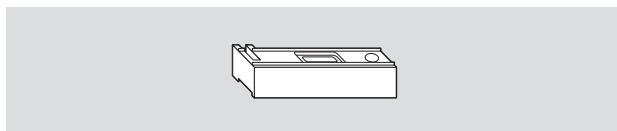
309245



MVS magnetic bushing

For plugging on and bonding using Loctite 431 to hardware-coupled magnet with large clearance, for use with MVS contact element VdS-B only.

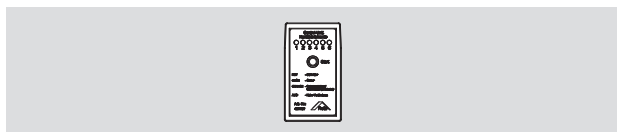
384019



Drilling jig for MVS adhesive magnet AluVision

MVS drilling jig for adhesive magnet

318573



Control-unit contact elements

Control-unit contact elements

491702

MVS radio control unit (not shown)

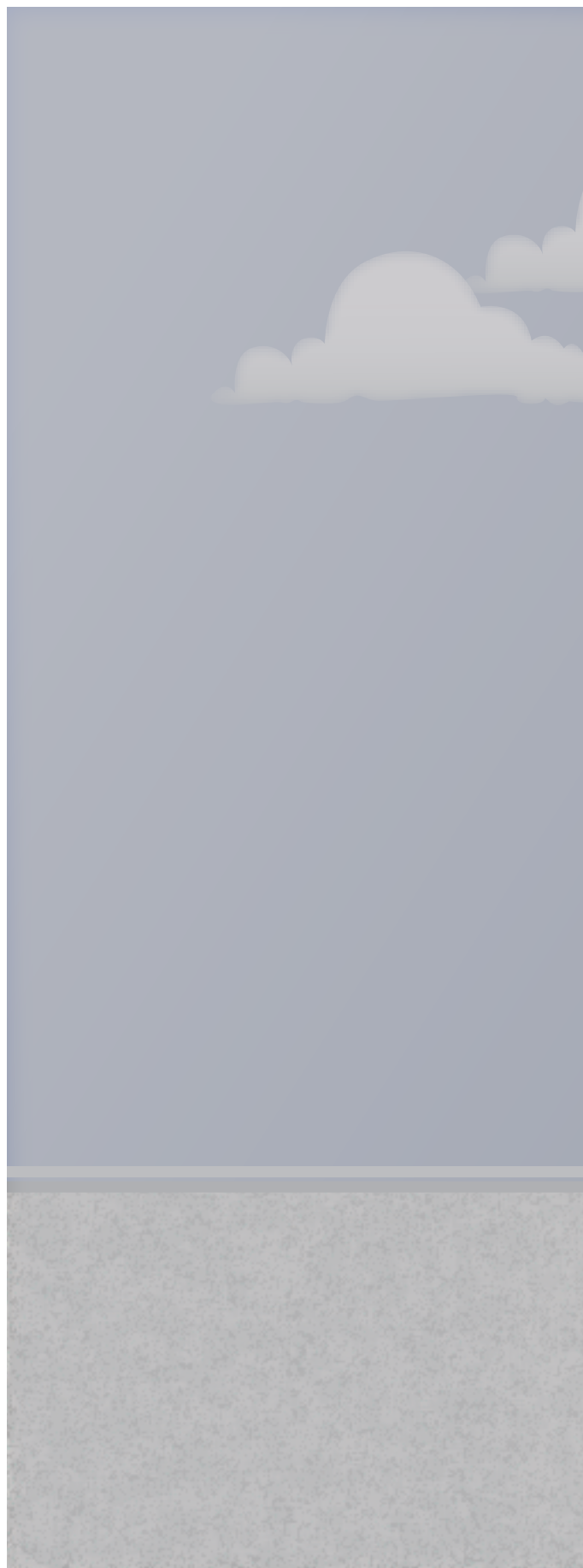
For functional check of MVS radio window contact.

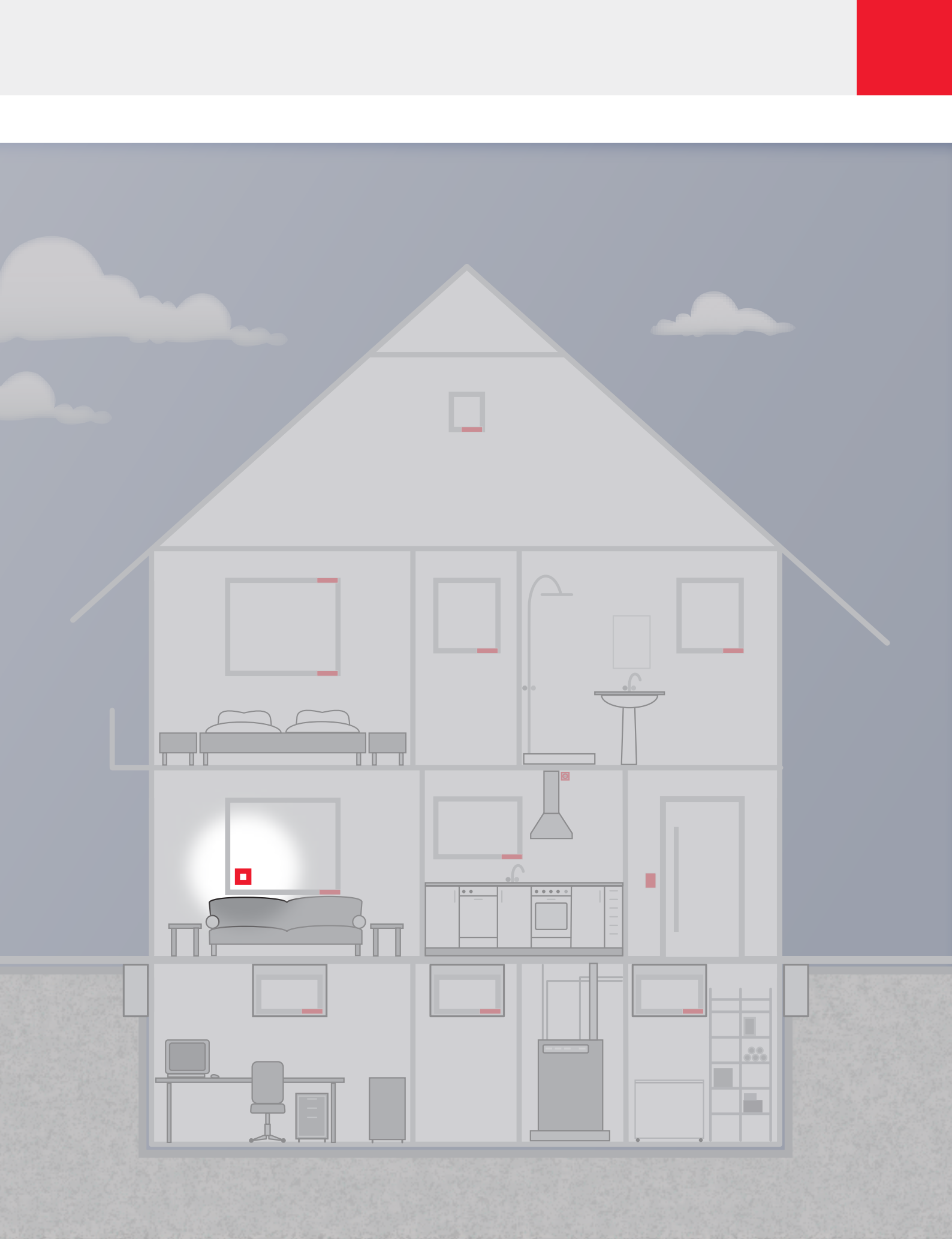
566977

Glass protection electronically regulated

Efficient glass protection

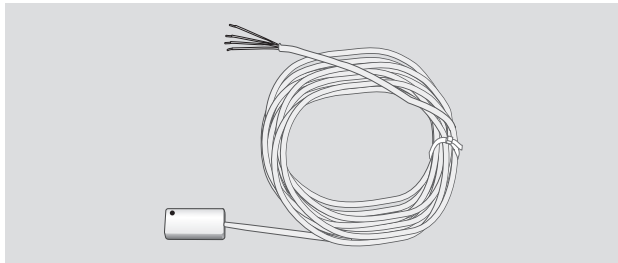
Building apertures made of glass such as windows or glass doors impart a feeling of wide open space. However, in potential intrusion terms, this also presents a simple means of entering the house. To ensure that the aspect of security is not lost sight of, the Roto glass breakage detector provides a reliable burglary protection component.





MVS glass breakage detector

Positioning



MVS glass breakage detector VdS-B

Cable: 6 m, white, with installation instructions and LED display **377618**

For diagonal areas > 2 m, use 2 glass breakage detectors.
Fix in place using Loctite 319.

Technical data

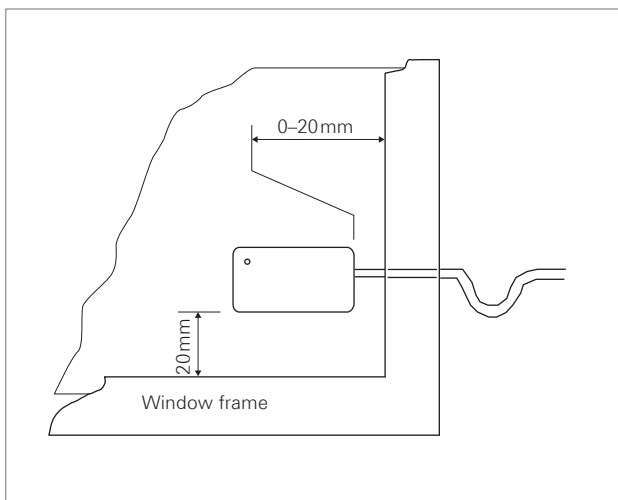
Housing base	Ceramic substrate
Operating voltage	3 to 16 V DC
Permissible ripple	Max. 1.0 V _{SS}
Quiescent current consumption	<1 µA (approx. 20 nA)
Operating current, triggered at 6 V DC	Approx. 4 mA
Extinction voltage	Max. 1.0 V
Extinction duration	Min. 12.5 ms
Connecting cable	LIYY4x0.14 mm ² Cu zinc-plated; LSA Plus IDC method of termination compatible
Inner conductor	White
Cable dimension	Ø 3.2 mm (up to 10 m length VdS approved)
Housing dimensions (WxHxD)	37 x 19 x 12 mm
Housing material	S-B
Colour	White or brown
Temperature range	-25 °C up to +70 °C
IP rating	VdS environment grade IV; IP 67

VdS recognition

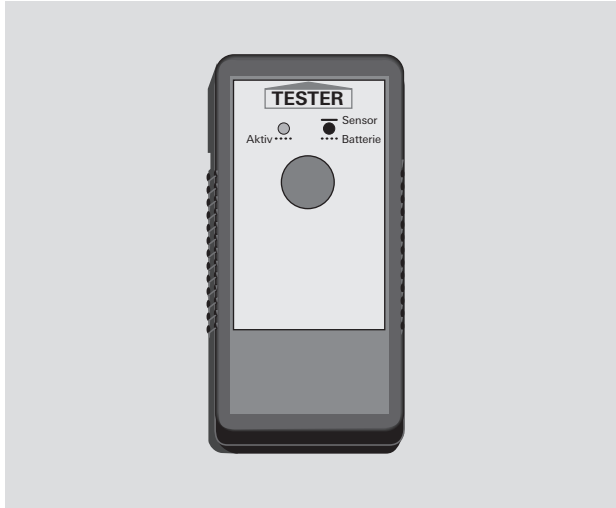
G188514B

Positioning

For diagonal areas ≥ 2 m use 2 glass breakage detectors



MVS glass breakage detector Accessories

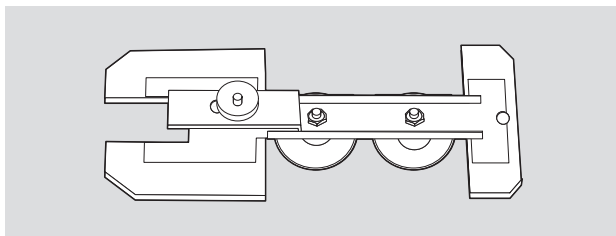


MVS glass breakage detector test device

Automatic shutoff, battery display, connection for glass breakage detector, display for glass breakage detector functional test **377619**

Technical data

Operating voltage	6 to 10V DC
Current consumption with button pressed	Approx. 60 mA
Current consumption with button pressed after automatic shutoff	Approx. 1 mA (stand by)
Battery lifespan with 9 V- Alkaline/ manganese compound battery	Approx. 8 hour operating period or 3000 actuations (each 10s long)
Operating display:	green LED flashes when button pressed for approx. 10s (activation period)
Transmission medium	Piezo ceramics on aluminium plate
Piezo-electric control	130 to 138 kHz, pulsed at approx. 300 V _{SS}
Ultrasonic pulse capacity	Approx. 0.8W
Height x Width x Depth	120 x 60 x 25 mm
Weight (with battery)	Approx. 150 g
Housing material	ABS
Colour	Black
Temperature range	- 10°C to + 60°C
IP rating	VdS environment grade II; IP 40



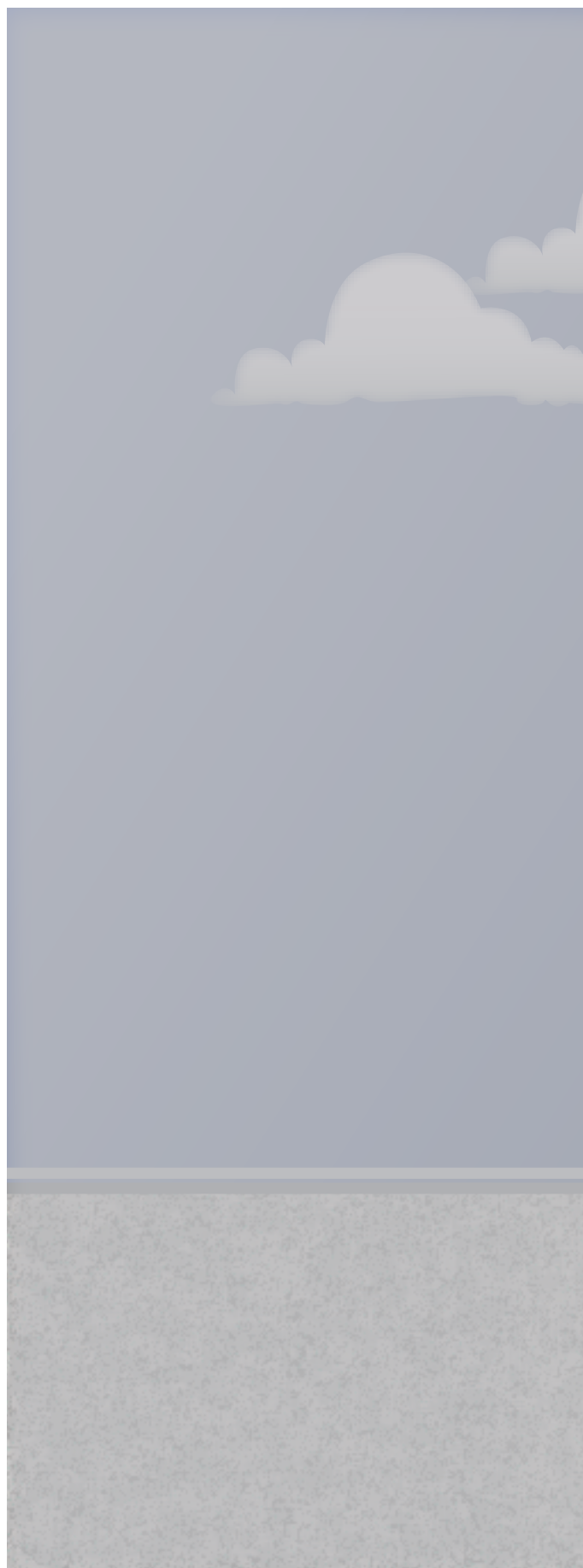
Installation jig for MVS glass breakage detector

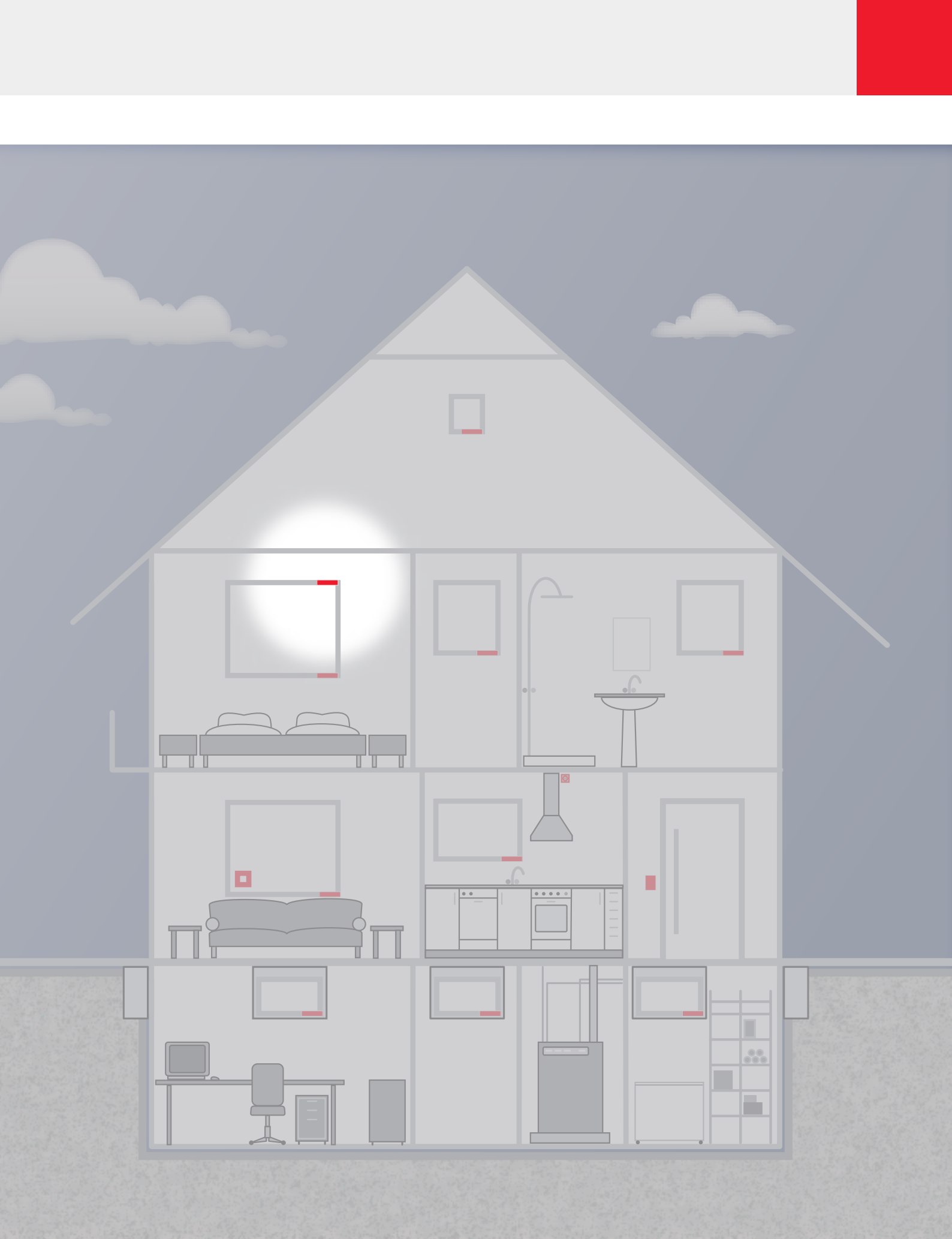
377620

Energy and comfort electronically controlled

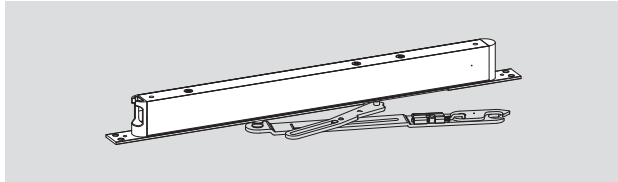
Simple, convenient, invisible.

The concealed electronic opening and locking system is completely integrated into the window and thus cannot be seen from the inside or outside. This means that the home environment is not altered. In combination with upgradeable systems, the possibilities are almost limitless: The window can be moved simply and conveniently into continuously variable tilt positions. When closing, the E-Tec Drive completely locks the window again.





Roto E-Tec Drive for Roto NT, hinge sides E5, A, K



Roto E-Tec Drive for TiltFirst & Tilt

Roto E-Tec Drive with power supply unit and cable, left	387800
Roto E-Tec Drive with power supply unit and cable, right	387801
Roto E-Tec Drive, left	387798
Roto E-Tec Drive, right	387799

Technical data

Power supply	± 5% stabilised 24V DC
Temperature range	Operation 0 °C to +60 °C Storage -20 °C to +85 °C
Air humidity	relative, non-condensing, 90%
IP rating	IP20 in accordance with DIN EN 60529
Tilting / closing	> 150 N > Risk of crushing! $V_{\text{tilt}} \leq 2.5 \text{ mm/s}$
Unlocking/locking force	750 N
Opening width	~120 mm
Hardware travel	16 to 36 mm (±2 mm)
Movement times	Open slowly/quickly ~ 110/70 s Close slowly/quickly ~ 130/80 s
Current consumption	Idle: ~15 mA Unlocking/locking: max. 400 mA
Width x Depth x Height	335 x 18 x 30 mm
Milled recess dimensions (W x D x H)	300 x 16 x 35 mm
Connection	RJ45, telephone 8 x 0.14 mm ²

Application ranges

Max. sash weight: 100 kg
Max. operating torque: 7.5 Nm

NT-Standard Tilt-First (Tilt before Turn)¹⁾

SRW: 690 to 1,400 mm
SRH²⁾: 500 to 2,500 mm

NT-Standard Tilt¹⁾

SRW: 620 to 2,000 mm
SRH²⁾: 600 to 800 mm

NT-Designo 2 Tilt-First (Tilt before Turn)¹⁾

SRW: 690 to 1,200 mm
SRH²⁾: 500 to 2,500 mm

NT-Designo 1

no approval

max. sash area (SRW x SRH) 1.44 m² up to wind speed 10 m/s



NOTE!

Recommended accessories: Group control unit
(see Page 54)

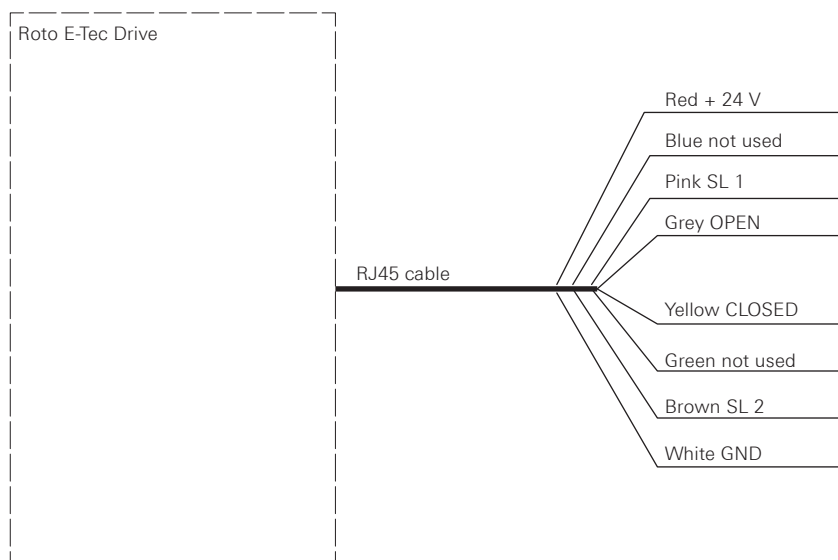
¹⁾ Binding application range, see installation instructions Roto E-Tec Drive.

²⁾ The minimum SRH is profile related. It has to be clarified in individual case.

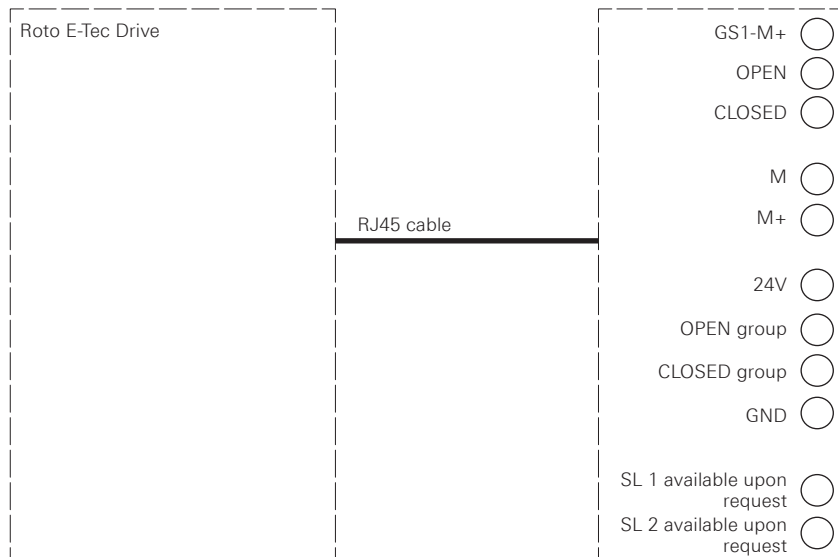
Roto E-Tec Drive for Roto NT, hinge sides E5, A, K

Connection diagram

Wired freely



Standard installation with GS1-M



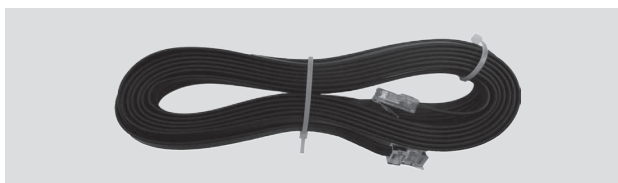
Roto E-Tec Drive for Roto NT, hinge sides E5, A, K Accessories



Power supply unit

24V/0.5A (standard installation)

387876



Cable

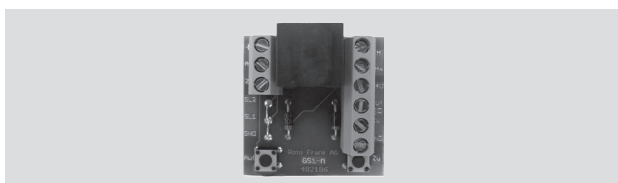
6m, black (8x0.14mm²)

387877

Cable

Special length

Available
upon request



Group control-unit

GS1-M

482186

- For easier wiring, through plug-in connector to Roto E-Tec Drive.
- When groups are formed, each Roto E-Tec Drive requires a GS1-M.

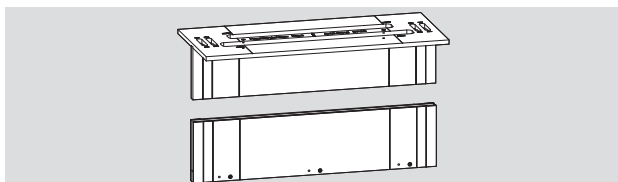


Manual control unit

Consisting of: Case, manual control unit, plug-in power supply unit (24V, 0.5A), cable (3m, 2xRJ45 connector), distributor adapter VA 8-8-8 (white, 3xRJ45 socket), control-unit operating instructions

479681

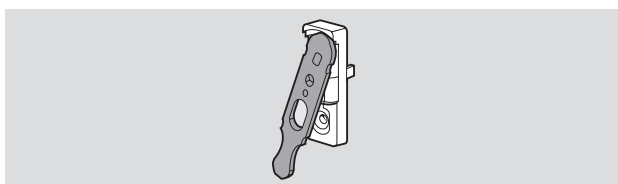
- For easier initial operation and maintenance.
- Plug & Play: Operation without electrical installation.
- Recommended for customers who use the drive on a more frequent basis.



Milling jig

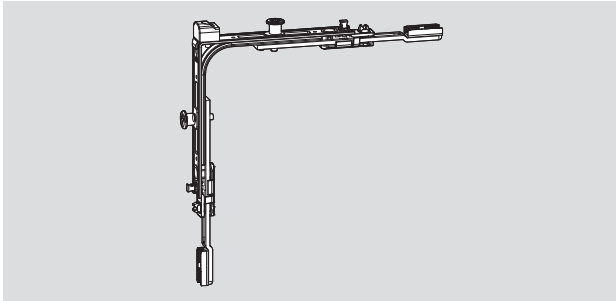
For milling a recess for the Roto E-Tec Drive in the surround frame

484650



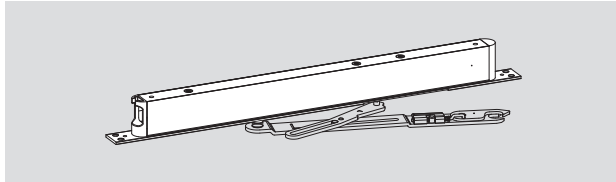
Sash lifter NT

284220

**Corner drive**

1P/1V SIL	389861
1P/1V black	477343

Roto E-Tec Drive for Roto AluVision T540-10, Designo



Roto E-Tec Drive

Roto E-Tec Drive, left

601169

Roto E-Tec Drive

Roto E-Tec Drive, right

601170

Technical data

Power supply	24 V DC \pm 5% stabilised
Temperature range	Operation 0°C to +60°C Storage -20°C to +85°C
Air humidity	90% relative, non-condensing
IP rating	IP20 in accordance with DIN EN 60529
Tilting / closing	> 150 N > Risk of crushing! $V_{Tilt} \leq 2.5 \text{ mm/s}$
Unlocking/locking force	750 N
Opening width	~ 120 mm
Hardware travel	16 to 36 mm ($\pm 2 \text{ mm}$)
Movement times	Open slowly / quickly ~ 110/70 s Close slowly / quickly ~ 130/80 s
Current consumption	Idle: ~15 mA Unlocking/locking: Max. 100 mA
Width x Depth x Height	335 x 18 x 30 mm
Milled recess dimensions (W x D x H)	300 x 16 x 35 mm
Connection	RJ45, telephone 8 x 0.14 mm ²
Switching strip	Normally open contact, terminator 1.2 k Ω



NOTE!

Use E-Tec Drive installation set for installation (see Page 58)

Recommended accessories: Group contact-unit (see Page 59)

Roto E-Tec Drive for Roto AluVision T540-10, Designo

Application ranges

Application ranges

Sash weight **SWE**: max. 100 kg
Sash weight **SWE**: at SH ≤ 700 mm max. 70 kg
Sash area: Max. (SH x SW): 1.44 m²
up to wind speed 10 m/s
Clearance **CL**: 11.5 mm

T540-10

TiltFirst

Sash width **SW**: 740–1600 mm
Sash height **SH**: 535–2200 mm

Tilt-Only, espagnolette non-centred

Sash width **SW**: 680–1007 mm
Sash height **SH**: 535–1300 mm

Tilt-Only, espagnolette centred

Sash width **SW**: 1008–1600 mm
Sash height **SH**: 535–1300 mm

Designo

TiltFirst

Sash width **SW**: 830–1600 mm
Sash height **SH**: 535–2200 mm

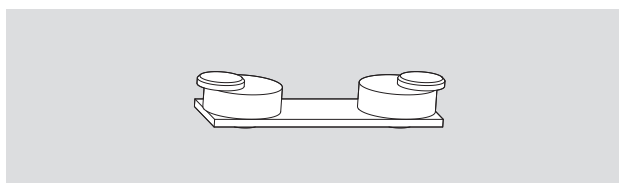
Tilt-Only, espagnolette non-centred

Sash width **SW**: 680–1007 mm
Sash height **SH**: 535–1300 mm

Tilt-Only, espagnolette centred

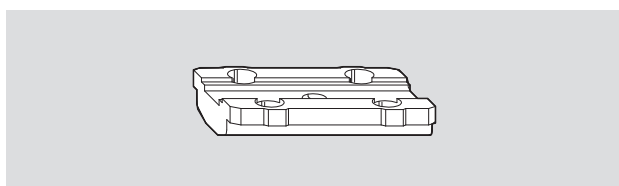
Sash width **SW**: 1008–1600 mm
Sash height **SH**: 535–1300 mm

Roto E-Tec Drive for Roto AluVision T540-10, Designo Accessories



E-Tec Drive installation set (not shown)

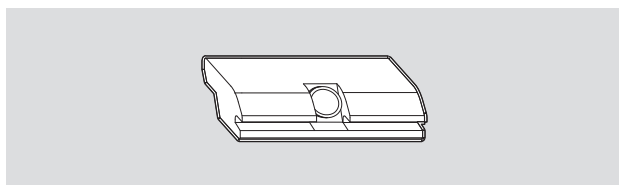
Consisting of: Driver, adapter, rebate clearance reduction (on **477455** frame and sash side), run-up block



SEC coupler component

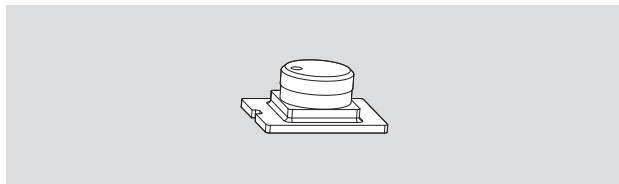
Connecting-rod connector

348576



Run-up block

212008



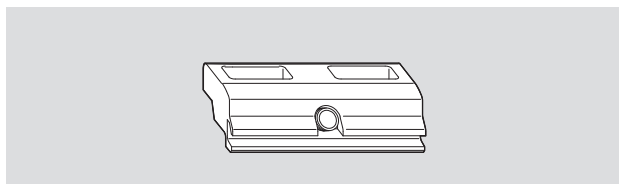
Run-up wedge

V.01

212762

V.02

212512



Rebate clearance reduction

T540 ETec

477408



Horizontal Tilt&Turn striker

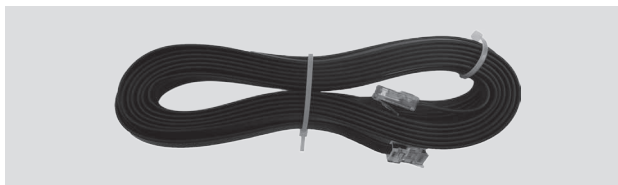
212122



Power supply unit

24V/0.5A (standard installation)

387876



Cable

6 m, black (8x0.14 mm²)

387877

Cable

Special length

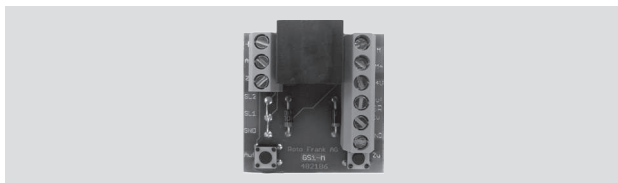
Available
upon request



Manual control unit

Consisting of: Case, manual control unit, plug-in power supply unit (24 V, 0.5 A), cable (3 m, 2xRJ45 connector), distributor adapter VA 8-8-8 (white, 3xRJ45 socket), control-unit operating instructions **479681**

- For easier initial operation and maintenance.
- Plug & Play: Operation without electrical installation.
- Recommended for customers who use the drive on a more frequent basis.



Group control-unit

GS1-M

482186

- For easier wiring, through plug-in connector to Roto E-Tec Drive.
- When groups are formed, each Roto E-Tec Drive requires a GS1-M.

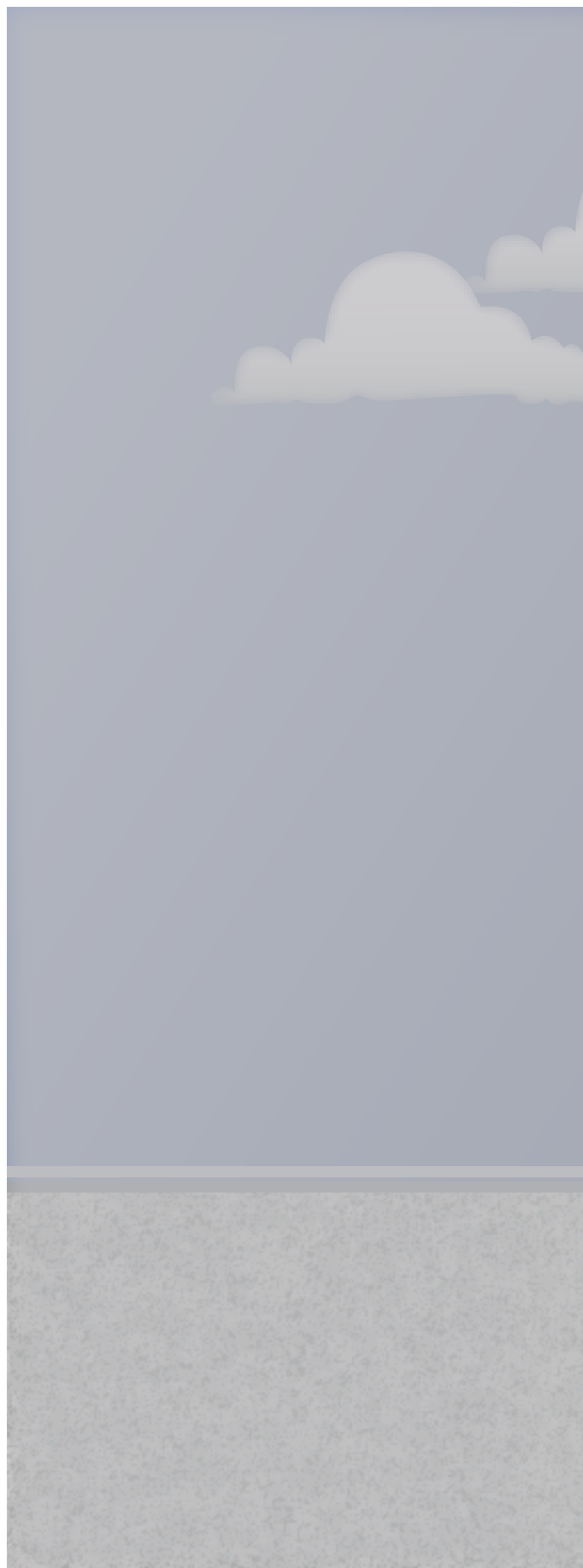
Intelligent locking and convenience electronically controlled

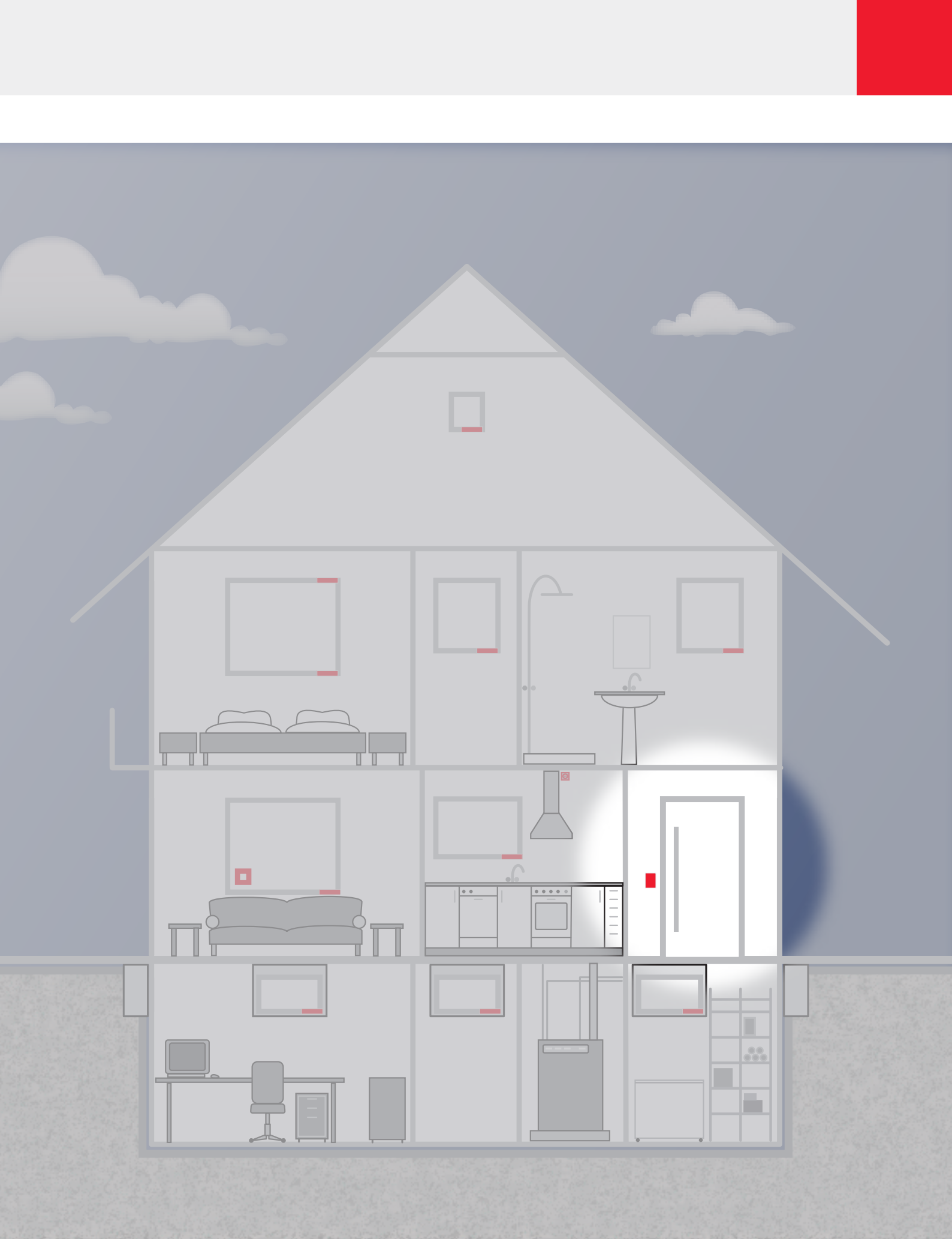
Locking - as and when required

Main-entrance doors to apartment buildings often only have a simple lock and electrical opener, which means that they don't offer any meaningful level of security. The Roto DoorSafe electromechanical multi-point locking system for main-entrance doors in apartment buildings ensures that you can lock down your building against unwanted guests.

Making it easier for everyone

Main doors with no need for a key - Roto makes life easier for people





Electronic multi-point locking systems for main doors and side doors



Eneo A/AF

The Tandeo lock's integrated multi point locking system automatically locks the door, as soon as it has been closed. The automatic locking system signifies an enormous benefit in terms of both convenience and burglary protection. Moreover this solution can be opened quickly and comfortably using the two-way intercom system.

The DIN EN 179 tested escape door version "AF" completes the product range of mechanical-automatic solutions with electromechanical opening.



Tandeo bolt locking

When the door sash latches into place, Tandeo automatically locks itself. For maximum convenience



Eneo C/CC

There are some situations in which you don't have any hands free or you simply cannot be bothered messing around with a key trying to open a locked main door. So, it's great when your door is fitted with Roto Door-Safe Eneo C/CC. That's because with this convenient, electromechanical multi-point locking system, you don't need a key at all to open the door. If the door is then closed again once you are inside, the locking mechanism automatically locks if you want it to – electrically, reliably and so quietly, you hardly notice.

Security to meet customer needs

The day/night switchover function enables you to decide for yourself whether the door should lock automatically after it closes properly. The door locks in Night mode, but remains unlocked in Day mode.

With Roto DoorSafe Eneo C, a locked door can be opened from the inside using the pushbutton, while an unlocked door can be opened with the lever handle. Eneo CC with the comfort opening function, enables the door to be opened using the lever handle whether it's locked or unlocked.

Free choice of opening method

Roto DoorSafe Eneo multi point locking systems can be used and opened in combination with various access-control systems – such as, for example hand-held transmitters (EneoC/CC only), finger scan, PIN code keypad or Bluetooth.



Roto DoorSafe hand-held radio transmitter

(For Eneo C/CC only)

- Hand-held transmitter in compact design with one button: small, elegant and easy to use.
- If a hand-held transmitter is lost, all you have to do is reprogram the code for the receiver.
- Maximum security against code scanning: through 66-bit coding and a "Rolling Code System", which inhibits the playback of recorded codes.



Bluetooth

- The door is enabled through, for example a mobile phone, and then opened by touching the Bluetooth symbol.
- Touch-sensitive glass plate.
- Nothing needs to be altered or installed on the mobile phone.
- Easy, reliable operation.
- Attractive look thanks to stainless-steel front panel.



PIN code keypad

- Comfortable door opening at the touch of a button.
- Individual programmable 4 to 6-digit code.
- Easy to operate, even in the dark, thanks to LED lighting.
- Attractive look thanks to stainless-steel front panel.



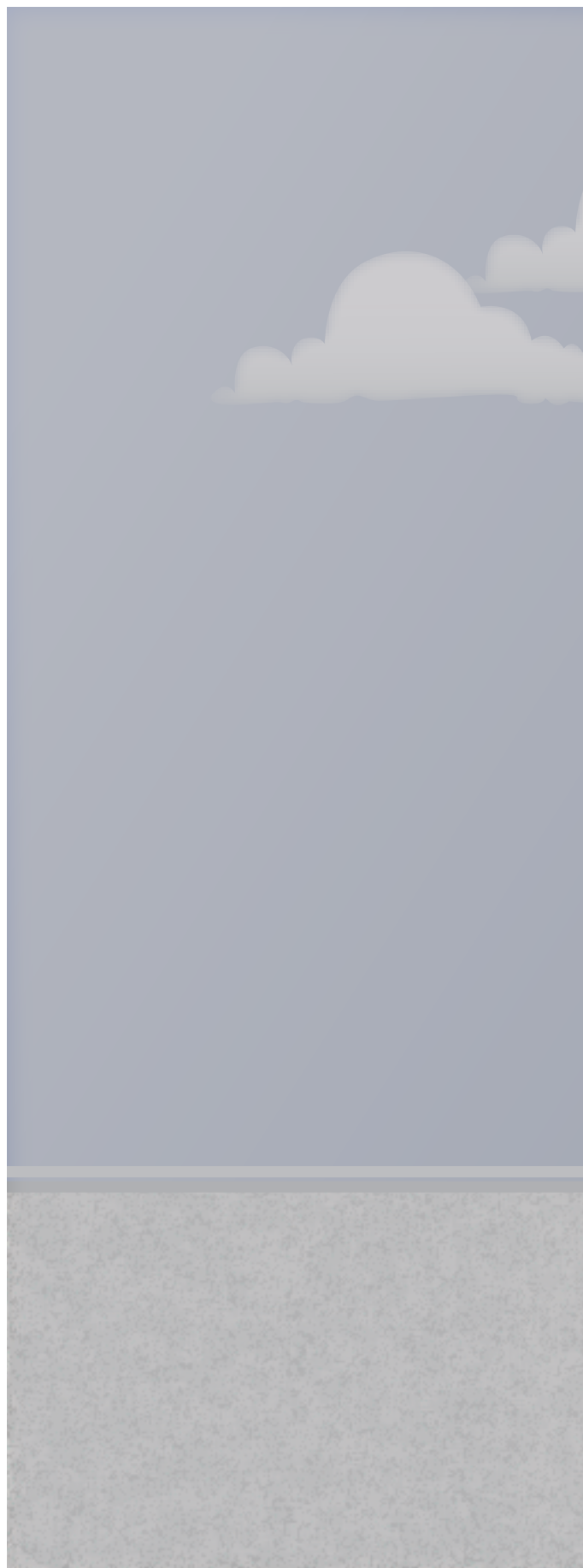
Finger scan

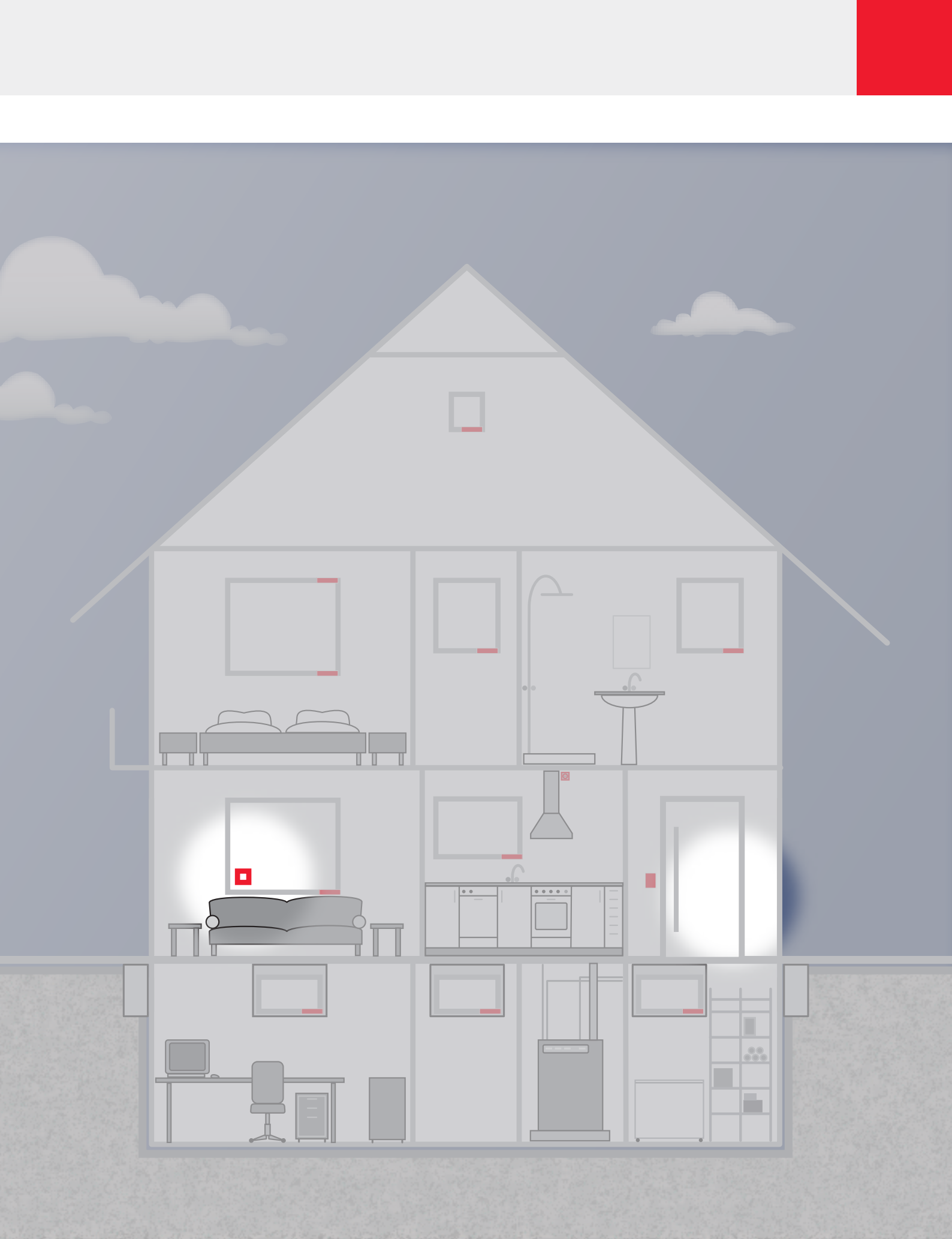
- Comfortable, quick door opening.
- Saves up to 150 fingerprints
- Automatic reprogramming: The same finger is recognised for each opening process even faster and more reliably.
- Also works with children.
- Meets highest security standards.
- Attractive look thanks to stainless-steel front panel.

Connection and transmission of cable junctions

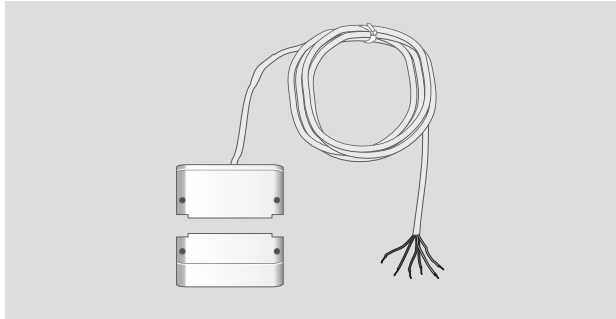
Well connected

To ensure that signals are reliably transmitted between the frame and the sash, Roto provides concealed cable junctions that have been matched to our electronic components. Variants with detachable connections ensure that installation is simple. To this end, Roto has the correct cable junction to meet every demand, irrespective of the frame material and the type of opening involved.

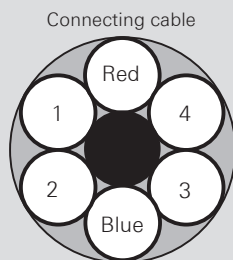




Contactless transmitters

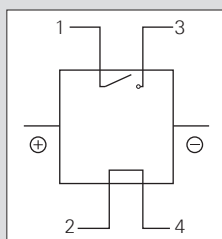


Transmitter connection



Supply lines to be electrically measured before being connected!

Wiring diagram



Electronic contactless transmitters VdS-B

White

377622

Technical data

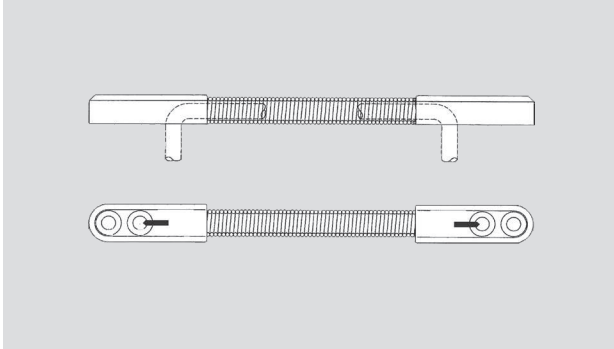
Operating voltage	9 to 15 V DC
Permissible ripple	Max. 1.0 V _{SS}
Quiescent current consumption at 12 V	Approx. 7 mA (max. 12 mA)
Operating current triggered at 12 V	Max. 22 mA
Transmitter-receiver installation distance	Max. 10 mm
Side offset installation	Max. 3 mm
Distance to metallic parts	Min. 5 mm
Transmission frequencies	145 kHz and 290 kHz ± 5 kHz
Alarm output	Electronic switch
Max. Breaking capacity	24 V DC, 200 mA, 300 mW
Transition resistance	Approx. 5 Ω
Parallel capacitance	Approx. 10 nF
Connecting cable	LIYY 6x0.14 mm ² Cu tinned; LSA-PLUS IDC method of termination compatible
Inner conductor	4 black, 1 red, 1 blue
Cable dimension	Length 4 m; Ø 3.8 mm (up to 6 m length VdS approved)
Housing dimensions (WxHxD)	68x29.3x10 mm
Housing material	A-B-S
Colour	White
Temperature range	-25°C to +70°C
IP rating	VdS environment grade IV; IP 67
Reset of glass breakage sensors	Temporary interruption of 12 V supply (≥ 20 ms)

VdS recognition

VdS no. G195504B

VdS grade B

Cable junctions



MVS mini cable junction window rebate

Incl. screws.

377621

Device for guiding an existing cable between frame and sash.

Technical data

Internal diameter	5.3 mm
Cable diameter	Max. 4.9 mm
Overall length	191 mm
Colour	Silver
Spring material	Steel, chrome-plated
End cap material	Zinc diecasting, chrome-plated



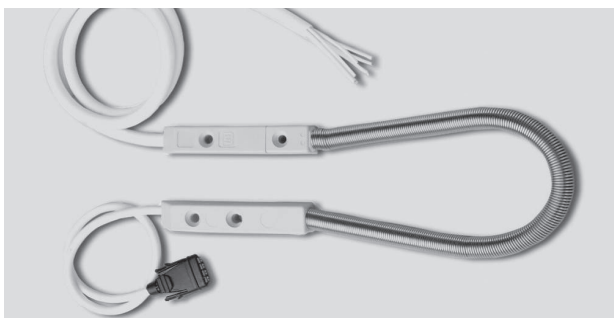
Detachable cable junction, M1334

Incl. screws and installation instructions

619586

Technical data

Cable	LiF9Y11Y 6-pin version Ø 4.9 mm, white
Wire structure	Max. 2.0 A current load
2 wires 0.34 mm ² red and blue	Max. 0.5 A current load
Wire structure	Max. 2.0 A current load
4 wires 0.14 mm ² white, brown green and yellow	Max. 0.5 A current load
Cable length on socket side	4 m
Cable length on plug side	6 m
IP rating in accordance with DIN 40050	IP67 (when plugged in)
Max. voltage	48 V DC
Temperature range when moving	–5 °C to +50 °C
at rest	–25 °C to +70 °C



Detachable cable junction for glass breakage detector M1340

Incl. screws and installation instructions

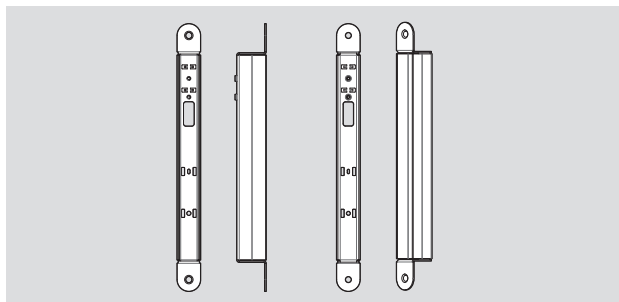
619587

Technical data

Plug cable	LiF9Y11Y 6x0.14 mm ² Ø 4.9 mm, white
Socket cable	LiF9Y11Y 4x0.14 mm ² Ø 3.2 mm, white
Cable length on socket side, out- side of spiral	0.33 m
Cable length on plug side	6 m
IP rating in accordance with DIN 40050	IP67 (when plugged in)
Max. voltage	48 V DC
Max. current	0.5 A
Temperature range when moving	–5 °C to +50 °C
at rest	–25 °C to +70 °C
Environmental grade in accordance with VdS 2110	III
VdS approval number	G 108094

Cable junctions for doors, see Roto Door Catalogue CTL_8.

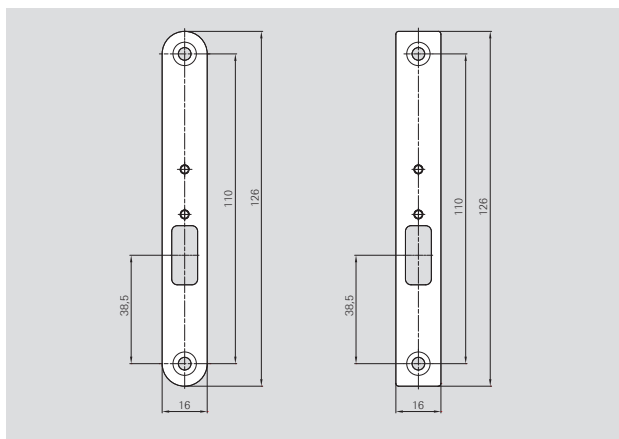
Accessories



Installation module M1703

With small clearance for admitting detachable cable junction (M1330, M1340)

619585



Shroud made of brushed stainless steel

Incl. screws
type M 17 00 for timber windows

619588

Shroud made of brushed stainless steel

Incl. Screws
type M 17 01 for plastic and aluminium windows

619589



BACnet

Higher-ranking bus system, frequently used in commercially-used premises. KNX or LON are usually activated at the operating level.

Hardware coupled magnet

Forms a functional unit with the contact element, fastened to the connecting-rod of the sash. Used for locking monitoring along with the combined locking and opening monitoring.

Bus

A transmission medium (mostly 2 wires), for connecting several devices to enable them to exchange data and signal transmission. Structure similar to that of a computer network in a company. Bus systems are often started up using a PC, which can be used to program how the data packages are assigned. One advantage here lies in the fast and easy electrical installation with simple rules and flexible assignment, which - depending on the system involved - can also be changed over the Internet using an appropriate password and suitable software. This is added to by the enormous functional versatility of such applications such as light, sunshades, alarm, climate control, heating, remote maintenance, etc.

Bus compatible / bus compliant

In many invitations to tender, "bus compatible" refers to the bus building management system, although the actual bus system is not specified. In this event, standard contact elements are generally used. The electrician installs the couplers to match each bus system. The MVS contact elements VdS-B LSN or VdS-B LSNi require VdS-certified alarm systems equipped with Bosch bus system LSN or the advanced LSNi system. LSN and LSNi are not compatible with each other.

DAS

Extractor fan control system

DoorBase

Mortise locks

DoorLine

Main door hinge applications

DoorPlus

Door threshold system, double cylinder, lever-handle sets and corner welded connectors

DoorSafe

Multi point locking systems. The DoorSafe product range encompasses all locks and frame components for main and side doors (cylinder-operated multi point locking systems MVZ and electromechanical multi point locking systems).

DoorSafe Eneo

Main door lock with motor drive. Electromechanical multi point locking system, actuated through Bluetooth, remote control, PIN code keypad or fingerprint.

EN 50131-2

For opening monitoring only. Burglar alarm systems in the Central European region mainly use locking monitoring. This is covered by VdS directives.

Ethernet

Higher-ranking bus system

External alarm

See Tilt monitoring

Rebate magnet

Forms a functional unit with the contact element, fastened to the sash. Used in opening monitoring or also for locking monitoring (for dummy mullion sashes = double-sash window).

Positive drive is assured by the hardware because the active sash can only be closed and locked using the hardware-coupled magnet system, when the double-mullion sash was locked first.

External-field monitoring

The "External-field monitoring" function checks whether the contact element has been manipulated in any way by an external magnetic field, and whether the burglar alarm system should be replaced. A special contact element is used here with two contact circuits, which are connected to the burglar alarm system. While the first contact reacts to the magnetic field of the magnets (locking and/or opening monitoring), the

second contact only closes if an external magnetic field is applied from outside. Each of these pulses triggers an alarm through the burglar alarm system. The “External-field monitoring” contact circuit is combined with external-field monitoring elements for the MVS contact element VdS-C 6.

Internal alarm

See Tilt monitoring

Tilt monitoring

In insurance-specific terms and according to the VdS, tilted windows are deemed to be open windows. Despite this, many users wish to have an armed alarm system, even when the windows are tilted open. To this end, two contact elements are integrated into the window, which differentiate between the so-called internal and external alarm systems. The changeover from one type of alarm [internal (tilt monitoring, presence)/external (locking monitoring, absence)] to another is done in the alarm system’s switch cabinet. Generally, for an internal alarm an alarm warning is only issued in the building, and those present in the building must then respond. An external alarm is generally one that automatically notifies the police or a security service. Locking monitoring with a hardware-coupled magnet requires an MVS contact element VdS-B or VdS-C, depending on the security grade in question. Tilt monitoring generally requires a contact element VdS-B (on no account VdS-C or MTS) with rebate magnet positioned horizontally at the bottom of the window.

KNX (formerly EIB, frequently known as KNX-EIB)

A widespread bus system in the building management system.

Combined locking and opening monitoring

An MVS contact element and hardware coupled magnet monitor the lock (locking system) and the opening status of a sash through a 2-conductor cable. Opening monitoring (locking not conducted) blocks the alarm system from being armed. Once armed, the locking monitoring system reports any change in the locking status and triggers an alarm, where applicable. Any manipulation to the sabotage lines will also result in an alarm warning.

LCN (≠ LSN)

Local Control Network

LON

A widespread bus system in the building management system.

LSN/LSNi

Local Security Network /

LSN Improved Module. Bus system for VdS-certified alarm systems with the Bosch bus system LSN or the advanced LSNi. MVS contact elements with matching bus couplers are VdS-B LSN or LSNi.

MTS

Magnet thermostat control for building management system. Used for controlling heating and air conditioning systems. The MTS contact element is a changeover switch and therefore universally applicable.

MVS

Magnetic locking system For controlling burglar alarm systems, certified according to VdS-B and VdS-C.

Opening monitoring

Monitors sash contact with the frame.

Opener

Normally closed or open contacts are closed when idle, and active when opened. Wiring diagrams always show the idle status.

Potential -free contact

A potential-free contact is used to make or break an electrically-conductive connection. A switching potential (voltage) is applied to one of the connections so that it can be switched to the other connection. The potential can be selected at random, something that is not possible for devices/components with a hard-wired potential. See also Normally open contact, normally-closed contact, change-over switch

Dry reed contact

Contact is actuated through application of a magnetic field.

Normally open contact

Normally open or normally closed contacts are open when idle and closed when active. Wiring diagrams always show the idle status.

Peak connection (sabotage line)

A peak connection is an electronic circuit, to which a voltage is applied. A burglar alarm system supplies and monitors the circuit. If the circuit is interrupted, e.g. through destruction of the cable connection, the burglar alarm system is triggered. Two switching lines are permanently connected for contact elements with peak connection. All the connections on the contact elements look the same.

VdS

Inspected. Approved. Safe. (formerly Association of Property Insurers)

VdS grades

VdS (German Association of Property Insurers) defines the minimum classification requirements made on burglar alarm systems; these must be stringently adhered to in order to be approved.

VdS grade A

Grade A burglar alarm systems are only equipped with simple protection against intrusion attempts. Roto does not provide grade A contact elements.

VdS grade B

Grade B burglar alarm systems are equipped with moderate protection against attempts to overcome them in the armed and unarmed state. The alarms feature a moderate response sensitivity.

VdS grade C

Grade C burglar alarm systems are equipped with increased protection against attempts to overcome them in the armed and unarmed state. The alarms feature an increased response sensitivity. Extensive monitoring of the security-related functions is given.

Locking monitoring

Monitors the sash locking process.

Changeover switch

Changeover or changeover contacts (changeover switch) change the contact connection when activated. Wiring diagrams always show the idle status.

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From a single source: Optimum hardware systems to meet all challenges

- Roto Equipment** | Additional technology for windows and doors
- Roto Door** | Matching hardware technology "right round the door"
- Roto Sliding** | Hardware systems for large sliding windows and doors
- Roto Tilt&Turn** | The Tilt&Turn hardware system for windows and balcony doors